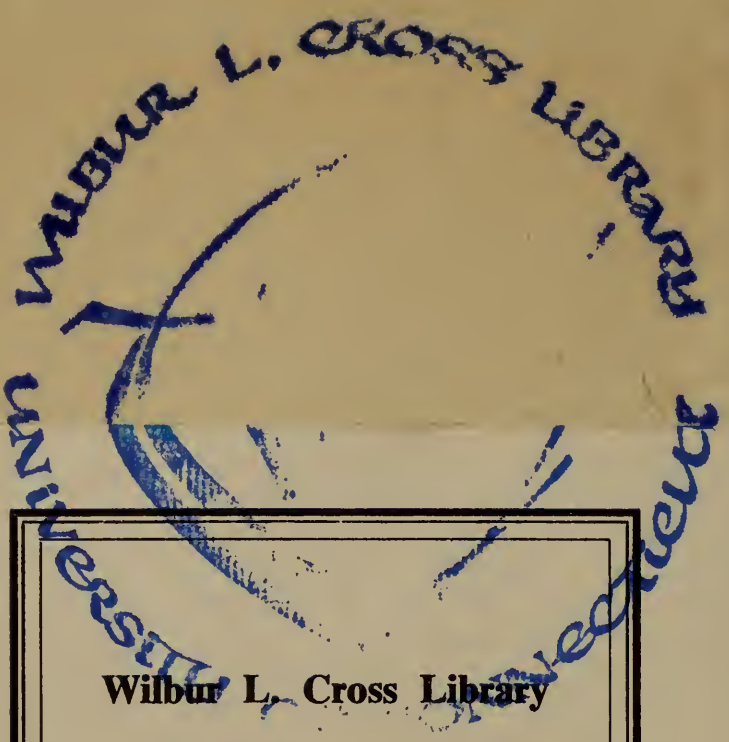

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DEDICATED TO:

The dignity of Man and
his spirit

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"Tell me, have you these in your houses? Or have you only comfort, and the lust for comfort, that stealthy thing that enters the house a guest, and then becomes a host, and then a master?"[1]

Kahlil Gibran

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1. Kahlil Gibran, *The Prophet,* pp. 38 and 39.

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THE COLD SKY

I PUSHED a small branch back roughly before me with my gloved but numb hand. It must have been drier than any of us because it snapped off loudly and startled me. I cursed, tossing it aside, and stepped into the clearing. Then I looked up. Overhead the cold, grey sky still hung there, bathing us in its miserable half light. I had glanced up hoping again to see a saving streak of blue through the whiteness, but as usual there was nothing but mist. For days we had been hoping and even praying that it would clear up so that our planes could get through and give us some support . . . it was our only hope. Again I glanced up, never really expecting to see anything but still looking as if the act of looking itself might somehow mysteriously bring a break in our luck. Then I stepped forward across the crusty snow and headed for the abutment. . . . It was a crazy, mixed up sort of war, and about all I knew at the moment was that we were somewhere near Bastogne and lost. Yet, we were not lost completely because there in front of us was the abutment . . . but where was the rest of the world? Maybe even it was the wrong abutment! I could be sure of nothing except that we had to keep going.

As I led my platoon down a snowy slope to the base of the bridge abutment, I was beyond much thinking. Like a boxer in a losing fight, I just wanted the bell to ring and end it all. It seemed as though I had been born in battle and fought in one ever since. Everything besides war seemed like a vague, unreal memory. Maybe I'd feel different

if only I could get some rest, but except for a short period we'd have to take in this new position, there was no relief in sight. We weren't even sure of where we were, where our own lines were, or of anything except where the krauts were . . . they were all around, somewhere, with what seemed like an endless supply of men to throw at us . . . and those lousy damn Tiger tanks.

For all we knew our world was at an end. I don't suppose any of us really thought we'd come out alive or even thought about it any more, for that matter. It was simply a matter of taking whatever fate dealt us and fighting like hell for every card we could get, above the table or under it.

Down the slope I went, with the snow and mud beneath pulling at my tired feet, now numb and without much feeling. I felt like the landscape before me, washed out and pale. But like a machine I kept going, kept fighting the urge to lie down and die. Thank God it was getting darker, because with that we'd have to stop finally and hole up. I could hope for a chance to recuperate. All around us were the dark, bleak trees, stuck in the whiteness like bars in some ghostly cell, and my eyes darted to them constantly. I was tired, sure, but not too tired to watch out for sudden death. Something within me, something perhaps instinctive, still held on to hope.

Below me, some of the men had already begun to group near the abutment where I'd said we'd stop and others were off trying to salvage a dry scrap of wood here and there or to take up security positions. The creek was practically dry except for a thin layer of ice that crackled under my boots as I came across it. Above us, the abutment, no longer supporting a bridge, projected out like a ruined relic of some ancient civilization, the snow helping to mask its modern origin and muffle everything into a quiet unreality. I laid my Thompson submachine gun against a rock, grateful to be rid of its weight for awhile anyway, and went over to where my

platoon sergeant had found himself a nice little spot near a big tree.

On the way over I paused to tell one of the men to scout around the other side of the abutment and set up a post. We seemed to be free of the krauts for awhile anyway, but I didn't want to take any chances. Maybe with luck we could even pick up battalion on the radio and get out of this stupid mess. Besides, even if things were hopeless I couldn't let the men think I felt so. It was the least I owed them . . . the chance to face the end with hope still in them. Sometimes I had wondered what strange pattern of this universe had placed me there, leading other men to their deaths in a wasteful sort of abortion of common sense, men who had long since lost the spark of aggression, the illusion of glory, men whose only great desire was to go home and leave the war to historians. As for me, my only hope was to keep the justice of my side ever before me and pray for the nightmare to end. It was the balm for my weariness.

Now, around me, seemingly trusting me to bring them out again as I had before, my men went quietly about their tasks. A wave of anger flushed my face and in spite of the hopelessness, I was determined to save my men. I had to suppress the urge to grab my Thompson and charge into the maze of forbidding, black tree trunks, their tops lost in the dark and fog. Though I felt like licking the whole German army single handed for simply being out there somewhere, I fortunately still possessed enough to keep myself rational and go on.

Then suddenly, a shot rang out, more of a "pop" in the muffled atmosphere than anything else . . . then another, followed by the unmistakable rip of a kraut "burp" gun! It had come from around the abutment, where I had sent the scout a few seconds before. Instinctively, by reaction born of long experience rather than any rational decision,

the men grabbed their weapons and bounded around the abutment. Meanwhile, I ran in a crouch for my Thompson, the weariness of my body thrown off by the adrenaline of my system. Next, without even stopping, I snatched up the weapon and headed around the abutment with my men. What had happened I don't know except that we ran past the body of our scout smack into a band of attacking krauts.

Hell had been unleashed! Even before I got there it had become a disorganized, close quarters fight. My men were everywhere fighting for their lives. It had come so fast that there was no time to plan . . . only to act! I started shooting almost blindly in the hopes of gaining the fire power advantage and because it was the natural thing to do. My mind whirled in the confusion. If only we could have organized and met the attack as we should have maybe we would have had a chance, but before we had known it they were on us and we were on them, they were even throughout us for all we knew and we were throughout them. The cards had been dealt us and the hand was a loser for sure.

I raised my weapon and blasted away at the shadowy figures in front of me, when suddenly, in a flash of horror, I realized that the descending darkness, along with the mist had made it so obscure that in my excitement I had probably been shooting at some of my own men! Quickly I grabbed ahold of myself and searched for a definite target. I was aware that my men were dropping around me, and the pressure and pain of feeling the responsibility I always seemed to assume for saving their lives outrode my own fears. I had to save them! Somehow I had to come up with an answer! Then, in the quick, glancing search I had made for a target, I spotted a huge kraut whose size or demeanor or something else, I did not know what, told me that here was the one to get. His fire, in particular, was killing my men!

Right away I took a step closer. Since he had been advancing generally in my direction, using his "burp" gun from the hip, he was only about ten yards or less away and an easy target for me if I could fire before I, myself, was cut down by some of the hot stuff flying around us. Immediately I raised my Thompson's muzzle to fire. Then, at the same instant he turned, caught my intention and stood there facing me, like a dark and foreboding mirror image, only bigger and with the face of a fellow human being.

Perhaps because I had never faced my enemy at quite so close a range or for one of those strange and unexplainable reasons our lives seem to be so often strewn with, I hesitated on the trigger. Then, strangely and fortunately, so did he, and our eyes met. No longer were we two shadowy enemies, each a legendary and demoniacal destroyer of the other's beloved family and homeland, but living human beings with homes and families of our own. Even the murder of our friends around us seemed to be a thing taking place in another world, a world in which merely shadows faced each other . . . not real people, living and breathing for tomorrow.

We stood there, transfixed for a split second, a fraction of our eternity, until for some reason I did something that seemed completely out of context with the reality of my situation. I cannot explain fully or justify it. I can merely say that I did it, that as we can never predict what we will do under a given circumstance, we sometimes therefore find ourselves becoming the enchanted spectators of our own amazing actions. That is, what I was doing, I did. I simply lowered the muzzle of my Thompson and put out my hand in a gesture of friendship.

I could read the slightest instant of hesitation in his face as he too seemed to become caught up in our little world. The muzzle of his "burp" gun dropped, and he also strangely extended his hand to me, the trace of a warm but weary smile breaking the grimness of his countenance.

Though all this had taken such a very short time, being the product of uncontrolled actions rather than any considered thinking, I felt, without thinking, all the useless combat of human history. I somehow understood its necessity and the value of its place in the scheme of immature development. At the same time, I also seemed to be standing on the verge of a new era . . . a time of peace and understanding. Why, I don't know. It was more of a feeling, a wave of knowledge passing over me, than a thought. It had taken no time at all.

Next, just as his hand had come out and my thoughts had taken on these new feelings, I was thrown forward by a "burp" gun burst from behind, ripping into my spine at the small of my back. I knew instinctively that a whole section of my back had been blown away and that my life had reached that point at which all additions and subtractions had been made. A flash of grief passed over me as I realized that my end had come. Whatever possibilities or regrets there were, were no longer significant. My history had been written. This I knew as I pitched forward painlessly, mad at no one; but feeling only, perhaps, a sadness that what I had now learned should so soon be wasted and my thoughts, as well as my blood, be strewn upon the cold earth. The crisp snow rushed up at my face and my reality faded into nothingness.

Next I awoke, not in a hospital bed or on a cold, rainy battle field but from a dream in my own home . . . safe even in the realm of time from any war. Yes, I had died but only in a dream. I had been dreaming that which I had never experienced in reality . . . my own death in battle. Then I thought back and wondered, my whole outlook sobered and my soul exhausted. It had happened, the whole battle, within the confines of my imagination, yet to me at the time it had not been a dream. It had been as real as if I had actually been through it. I could look back on it and wonder, but somehow the impressions it gave me

would probably never leave me. I seemed to walk from then on in a different manner, in a different consciousness. Perhaps I had been walking for some time in this new sobriety and had just not been aware of it until it had burst forth to my conscious being in the form of this unusually poignant dream. At any rate, however it happened, I was grateful . . . deeply grateful for the lessons it taught me about myself and the rest of mankind.

How well I remember the period during the last part of World War II and immediately following the cessation of hostilities. People had reached a higher state of selflessness than ever before, it appeared. For the first time in many years they had worried together about something transcending themselves, and issues of much more significance than how much in taxes they would pay crossed their minds and hearts. They were less anxious to find the solution to all problems in the childish game of war. They had loved, had died, and had occasionally risen to heights of courage and sacrifice beyond the appreciation of other ages. Then, like the beginning of a new chapter, came the atomic bomb with its hope for an enforced but lasting peace.

Can we recall the horror we felt on trying to first comprehend the fantastic power of the atomic bomb? In very much shorter a period than the twinkling of an eye a hundred thousand people had been obliterated, a hell on earth had been created by man equaling the imagined hell of any Beelzebub or Satan, and an age foreseen only by a precious few had been foisted upon the shoulders of the many. Reporters searched their minds for words adequate to describe destruction beyond the scope of normal human perception but found nothing could convey to others the true feelings impressed by the unprecedented sight of a man made sun blazing up before them. It seemed as though man would never be the same again or at least as if the new age foisted upon him were impossible of being accepted within the span of a single generation.

Slowly, however, man began to adapt to the idea. What was in reality a force equal to all the bombs dropped during World War II soon reduced itself in the minds of most people to a photograph no bigger than a two page spread in some magazine. Incredibly, many people even began to wish subconsciously that the atomic bomb had not been discovered for the unhealthy reason that increasingly frustrating world problems could then have been settled by normal, old fashioned war. That is to say, the lessons learned through the pain and anguish of the greatest war in history appeared to have faded almost into nothingness with the passing of but thirteen years or less.

Can we not, then, pause to search our memories for the feelings we had before this fading became acute? Must we, like myself in the dream, die to learn the value of every human being and the futility of resorting to animalistic combat in achieving our happiness? Surely there is another way for us to progress than by such self destructive means. Surely we must begin to look into our nature and begin to question not only "what" is going on in our universe but why it is going on. We must do this because the problem is not one involving only the hazards of increasingly more disastrous wars, it is one of basic human conceptual growth to the realization of man's place in the scheme of things beyond the satiation of his physical requirements. Wars are merely the results of not achieving this growth.

That is to say, we must begin to have the courage to realize that except for details of technique and military efficiency, the atomic bomb is not really the problem itself. The tragedy has been one of useless murder and not one of what weapons have been used in perpetrating the slaughter. Perhaps some of us can still see the faces of those who died in the last war calling out to us, "Peace, peace!" And somewhere within us perhaps we can even see our close friends, whose loves and hopes we shared so intimately, stacked like cord wood, cold and lifeless, with the wind gently blowing

their hair as the only sign of movement. Perhaps in our minds also, the surf is still lapping against the bodies of those who came ashore without walking, and the stiffened hand of another is still clutching a blood stained letter from home. . . . It may make us pause in our happiness and turn our hearts back to the longing for peace we had before. Sometimes, even, it may cause a tear to drop beside our thoughts.

Yet, next to the body of the one is another from a different land and a different culture but not one of so vastly different loves. In Japan, the Kamakaze pilot sang his song,

"We are like cherry blossoms,
Shining on the bough in Spring,
Living a moment
Against the blue, sunlit Nippon sky.
When the storm in fury
Breaks against our nation
Then let us fall, together,
Fall for our country's sake.

Though you and I were strangers,
We are brothers now in death,
Sumarai dying to keep the foe
From our sacred shores.
In the flame of battle
Should we not fall together,
Then let us meet in springtime
At Yasukuni Shrine."[1]

And the German soldier sang his Lili Marlene, which also captivated the imagination of the American and British soldier with its melancholy expression of something universal about the soldier's heart. Yes, he and the Japanese, regardless of what crimes he perpetrated individually and

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1. Teruaki Miyata (Dr. Earle Ernst trans.), *The Defeated,* pp. 58 and 60.

collectively, was still a man who fought and died in a bitter war. He fought for ideals of his own and something of beauty in mankind . . . his culture. His song was much the same as his enemies, his heart exactly the same.

Can we then hold ourselves so absolutely high because of their crimes when war itself is a crime in which we acted also? Can we look only at the military attacks, shutting out all view of economic and social crimes which might have instigated these attacks, and say so definitely where the blame lies? Can we, indeed, think that there is something very special about one breed of men with respect to another that makes him immune from blame or free from error? Perhaps so . . . but before we do, perhaps also we should pause to remember the caution of long ago, "Judge not, that ye be not judged!"

At the same time, let us never forget that aside from the relative merits of the systems involved, the desires and longings of the individual himself are seldom very different, regardless of his origin. He wants respect, he wants love. He fights usually because he feels he has to, not because he wants to.

Our world has reached a point where it must outgrow its struggle for material security and begin to develop socially, for if we do not grow socially and spiritually, we will destroy ourselves with our own blind greed. Beyond the fact that such has been made necessary by the potency of our destructive technical power and our social incompetence, we now desire it. Yes, we want to stop war. Where years ago man's mind was made up for him and guided for him by the thinking few, education and freedom of expression have taken this from the few and given it to the many. Today, mankind longs not only for freedom from physical poverty but for freedom from exposure to periodic slaughter campaigns. It is something that had to be gained, perhaps, through bitter experience. Nevertheless, the weariness man feels today from these ruinous wars is a very deep and

powerful force that must be satisfied. It is something we must satisfy not only to survive physically but to survive psychologically . . . spiritually.

The trouble is, of course, that though the world wants to put an end to war, it has not been able to do so simply because it does not know how to go about such a thing. Like any natural change, it must first overcome the old and then assume the new. Therefore, the world in its present position, being made up for the most part of rational beings, must first learn what constitutes the old it must outgrow and the new it must assume before it can proceed with its course. This means that we must not be satisfied with those comforts we have achieved but must question what it is that actually has been causing our present dilemma regardless of where the truth leads us. This will help us to then find out what it is we must do to remedy our problems and form a world society in which we have a chance of surviving as individuals and as a race. This, of course, means that since our survival depends upon our conclusions, we must be bold in our attack on the problem. We must not be afraid to question the most accepted of concepts and propositions in our quest nor allow ourselves to reject the solution once we find it.

We are on the verge of a new era, a new era in thought and discovery as well as in sociological history. Furthermore, the answer, we will soon see, will not be merely an extension of our present mechanistic philosophy, which has led us so dangerously (even, maybe, fatally) close to the brink of catastrophe, but will involve completely new ideas . . . even ostensibly absurd ideas when seen at first glance. We must not lose sight of the point that staring us in the face these days is the harsh fact of our own failure, that with the passage of time, we have not been solving our tragic problems. Only the prolongation of the blowup has been achieved. We have been merely learning to live with the problems, to suppress them like an unpleasant thought

in our subconscious mind. Eventually the suppression will weaken naturally until finally the pressure erupts from necessity. Yes, we *will* destroy ourselves if we do not succeed in this search for a solution, make no mistake about it. Therefore, what have we to lose by being bold in our approach?

We must soon begin to accept intellectually that man is more than a machine and ask if perhaps there is not, somewhere, something outside of materialism, even outside of our own capacities, that holds the key to our survival. For does it not seem illogical that frequently those bitter ones who hold so tenaciously to the idea that war is an inevitable and necessary function of man also hold that man, himself, by his own capacities can solve all his problems? Surely man has not done so, no matter how much we might wish it were so. We must, on the contrary, start re-examining ourselves and our basic trends critically and without passion. It is our duty. . . . It is our obligation. . . . It is our life or death!

"How often does what is reckoned as progress consist in a skillfully argued opinion putting real insight out of action for a long time!"[1]

Albert Schweitzer

1. Albert Schweitzer, *Out of My Life and Thought,* p. 104.

GROWTH

As MAN stands awe stricken on this tiny ball of matter known as earth, gazing into the stupendous immensity of the universe, he seems baffled temporarily by problems almost as tremendous as the universe itself. On the other hand, he peers ever farther into the intricacies of the atom and begins to take heart from the security of something held, only to have sharper focusing of the lens dissipate the reality of matter into waves of probability and mathematical nothingness. Desperately he turns his gaze skyward again, searching the stars for an answer and pondering the larger problems in solitude. Somewhere there must be an answer; somehow it must all fall into place, but how? If only he can reach them, he thinks . . . if only he can reach them, perhaps then he will know. But then, another and even greater problem looms prominently before him. The question is, what is it he will know? What is it he is searching for, and what is it that frightens him in the reality of "unreality" and in the contemplation of a universe that may be no more than a fantasy?

Though man seems to be standing on the verge of universal conquest, he is also standing on the edge of an abyss of self destruction. The tragedy is that a creature of such potential and almost inconceivable sensitivity cannot rise to conquer his worst enemy, himself. In fact, it is almost as though his developing capacities and knowledge had done little more than to throw him into a maze of perplexities. A casual observer might say that man, highly

adaptable as he is, has not been able to overcome psychological inertia and progress sufficiently in his maturity to keep up with the flow of factual discovery. That is, somehow we have arrived at a chaotic state in which acts of courage and dignity are intermixed with acts of barbarism and sanguinity to such an extent that individuals are frustrated by lack of intelligent order and acquiesce into helplessness. At the same time, we know that this predicament, unacceptable as it is and illogical as it seems, is by no means without reasonable background. We can see that our present position is not unnatural, but rather is the natural result of a historically visible growth pattern.

In this book, the nature of things will be presented in such a way that though our situation may appear no less unpleasant, it will, perhaps, become more understandable and thus easier to live and abide with. Also, we will be able to clear some of the dead wood from our minds and be able to guide our future steps, for the first step in achieving any solution is understanding of the problem itself. We must be able to realize that since our problem is so important to us at this time, we must not be afraid to analyze ourselves carefully, even brutally at times, and with daring. We must be willing and able to search the past and view ourselves not as a separate entity but as part of a continuous whole, grown and growing.

Therefore, the answer to our ominous predicament lies principally in a realization of our present position along the curve of our growth pattern; for man, like all created things, is, has, and always will be in a state of constant change or growth. That is, contrary to what some would have us believe, we have not reached the apex of our development in any sense of the word. Rather, we are merely at a point somewhere along an infinitely long and complex curve. Where, we cannot say, but suffice it to know that it is at neither end.

Intellectually, then, man has been ever expanding his

scope. Sometimes, a regression gives way in one aspect while in another respect man pushes on ahead, but generally the scope has been broadening. If we look back, we will see that thousands of years ago we ascended intellectually with the development of Greek rational thought. Unfortunately, or shall we say, naturally, we did not yet possess the technical ability to experiment along with our theories, so that theories they were to remain; but still, it was true thought in a high form. We wondered about things and then proceeded to develop abstractly that which we could not simply look upon and record. Our minds were growing in rational capacity. At the same instant, all was not growth, for we were having a difficult time growing socially. As a matter of fact, the political inability of the Greek society led to its physical destruction when more able social orders prevailed. The new orders, in turn, grew socially and politically where the Greeks had failed, though they lacked the intellectual status of their predecessors, and the next few centuries were more or less a process of amalgamation.

Then, after Christianity had served to bring a greater social consciousness not only to the Palestine area but to Rome and the nascent Western world, it began to decline spiritually through corruption and impotence of ambiguity. The sudden onslaught of the barbaric hordes of Europe had not only swept the Roman Empire clean, but posed a new and difficult front to Christianity. The religion of Christ, which was an advanced social idea over the already ancient culture of the Jews and Greeks, could not meet the cultural setback of the times without somehow adapting its methods and presentations to cope with cultural immaturity such as it was never intended to serve. Therefore, until such time as culture in Europe would arise to the level of its Eastern parents, Christianity was forced to either adapt or perish. Fortunately, it adapted, for though we today abhor the religious corruption of the dark ages, whose pagan-

ized form still plagues us today, it also preserved some of the hidden essences of true Christianity and helped us develop the socially conscious trend of Western thought which is our heritage.

With the barbarization of Christianity, however, the ancient East was left in a vacuum, and to offset this, we see how the great Islamic civilization rose to tremendous heights and actually injected European Christianity with a measure of spiritual rejuvenation. Greek writings, long lost, were brought to Europe via Islam, while the Renaissance began to flourish.

Roughly speaking, however, man in Western Europe had been going through a growth process, with the barbaric masses of Europe assimilating the culture willed upon them by Greece and Rome. The impact and pressure of Islam helped to act as a catalyst in this process perhaps, but at any rate, the process proceeded sufficiently to keep Europe from being swept into complete oblivion. As it was, the survival was little short of miraculous. Had not Ogotai, son of the Khan, died when he did, what would have happened to Western culture?

Europe crept slowly up into its own right and began to breathe again (even if on borrowed air) in the renaissance. Science, though no new thing, was beginning to stir in its shell, while rationalism, as developed in the middle ages, became irrational in that the dominance of an academic class of theologians came into power, bringing with it a blind or *irrational rationalism.*

In revolt against this situation, man's rationally prepared mind (awakened by contact with Islam) struggled to disentangle itself from the mire that was beginning to choke off its very existence. But the revolt was not easy. Religion in Europe, caught in its own web of superstition and unable to set back the setback, fell into an era of repression and utter irreligionism. The natural revolt, finding itself frustrated by lack of intelligent direction, ex-

pressed itself wildly and desperately in such things as devil worship (known as black magic and using the black mass) to such an extent that it threatened the power of the Church itself. The Church, in turn, fought back desperately to maintain its hold and to stem the tide of revolt. Blood flowed, but the revolt against the irrational and unnatural attitude of the prevailing thought could not be stamped out entirely . . . the cause was too just even though the direction was not. Fortunately, the Church was able to contain the even more unnatural and irrational revolt until the rise of science could give it a positive direction. Science had begun to emerge.

The thinking element of Man in Western Europe saw his salvation from the excesses of the Church in this new thing called science and was quick to take up the cause. The Church, on the other hand, saw it as just another in a line of negative revolts and rose to the challenge by crushing it whenever possible. The battle again became a bloody one, for though Galileo was humorous enough to dance both steps at the same ball, others were not and became additional fuel for the fires of intolerance. This time, however, the cause of revolution was not only just but positive. The inevitable victory would go to science, and the Church would do well to survive even as a vanquished servant. It might be kept in the house to provide its necessary service and to lend an air of respectability to the conqueror but its role of master seemed irretrievably lost.

Science vigorously began its struggle to break the bonds of the ecclesiastics and to establish its own mastery. It fought as hard as the power of its opponent required, in a long desperate struggle that was not to be conceded for centuries to come and then only tacitly. Fortified by the fortunate and almost divinely arranged appearance of intellectual giants on the European horizon, who sided to a man, it would seem, on the side of this new revolutionary force, the tide became too powerful to resist. Powerful

allies in the form of rising literary and philosophical giants joined the army of science (temporarily) to forget their differences and do away with their common enemy. It remained to science, however, to produce the fatal weapons necessary (ideological in this case). The factual argument is difficult to challenge at best without the broadest of mental scopes and such was not to be had among the opposing masses. The Church retreated farther into the recesses of irrationalism, but the worst handicap was the lack of any champions of enough stature to match the rising tide of eloquence. Had the Church been in the vigor of its youth, the story might have, perhaps, had a different ending, but on the other part, so might the battle never have occurred. As it was, the work of Thomas Aquinas could not long endure the onslaught of such as Roger Bacon, Copernicus, Galileo, Voltaire, Locke, Kant and others too numerous to mention.

The Church (and with it the religious concept) was in its declining years and rapidly approaching spiritual impotency . . . even senility in spots. It was not so much that religion or the religious approach had or was failing but rather that it was fading practically in direct proportion to the rise of ecclesiasticism. That is, the revolution was actually a spiritual revolution of sorts in that science offered people (in its respect for natural occurrence) a chance to approach the Creator naturally and without the stifling intercession of man's imposed authority.

The understanding of this particular situation is quite important, as is the whole process of revolution, for once a few courageous souls have sacrificed themselves in initiating a worthy revolt, there are always millions of lesser ones willing to stand on the victorious side to receive the spoils. Among their faces one can frequently see old enemies. This means that successful revolution, having won its battle by vigorous, progressive action soon becomes conservative by the assimilation of its opponents and by its own

fear of losing the grounds so recently won, and the revolt of science against the Church is no exception. Whitehead said, "This reaction was undoubtedly a very necessary corrective to the unguarded rationalism of the Middle Ages. But reactions run to extremes. Accordingly, although one outcome of this reaction was the birth of modern science, yet we must remember that science thereby inherited the bias of thought to which it owes its origin."[1] The problem of revolution by terrorism (such as recently in Morocco, Algeria, and Cyprus) for example, is that it is not so easy to stop the idea of winning demands by force as it is to start it. So frequently the glory of a just revolution is swallowed by aftermath and so digested that the victor becomes the vanquished. A few items are changed but the composition remains essentially the same except for a new frame.

Science, therefore, as it was initiated by the early revolutionists was not the same thing as is now championed so loudly by modern man. In fact, the closer kinship of the trained scientist of today is probably with those who condemned Galileo yesterday. The conservative Republican party of today is not the same as the trust busting Republican party of Theodore Roosevelt nor is the liberal Democratic party of today the same as the democratic party of Calhoun and Jefferson Davis. Time changes only the names. It must be understood that there will always be the battle for progress, even after a recent battle for progress.

Slowly, in our picture of man's growth, the mass of finite minds prevailed over the exceptional few to change what began as an objective search for truth into a fanatical materialism. We find that true objectivity seems to become more a proclamation than a practice . . . in other words, a hypocrisy. Where science should bear an open mind toward any proposition, this is very much not the case any-

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1. A. N. Whitehead, *Science and the Modern World,* p. 10.

more, and for this very reason, many scientists of today have to promote their ideas in the form of science fiction and under assumed names. So many examples exist of persecution by the unscientific bias of scientists that it is amazing to find intelligent people unaware of the situation. For instance, Col. P. H. Fawcett reported killing a snake over sixty feet in length while in South America but was called a liar back home. Only recently an author, who had made several short trips into these jungles, alluded to each exaggerated claims by explaining how easy it is to exaggerate the length of snakes found there through judgment clouded by awe. It seems insignificant that Col. Fawcett was a British army officer and a professional surveyor who had spent ten years roaming the jungles. The fact that Col. Fawcett, whose profession was the judging of lengths and distances, made the claim was of no importance because the story was simply too fantastic to believe. Unfortunately, Col. Fawcett was also something of a spiritualist, which reflected badly on his scientific reliability for the probable unscientific reason that spiritualism is not an accepted fact.

Whether there are snakes of over sixty feet in length, flying saucers, ghosts or any other "peculiar freaks of imagination" is of less importance here than the realization that such are considered freaks of imagination. That is, the revolution which began to combat this sort of thing has now taken on the same characteristics.

Man today is afraid to face what appears to be the destruction of his mental security, in the form of a material orientation, by the realization and acceptance of an intangible (perhaps unconquerable) orientation. Just as the people of the late sixteenth or early seventeenth centuries resisted the abhorrent thought of Galileo destroying their spiritually based security, the people of today resist the spiritual destruction of their security in absolute materialism. Make no mistake that such a modern revolt cannot face as fanatical an adversary, for the fear is at least as

strong as it was several hundred years ago. It is merely a new mask on an old player.

On the one hand, we find the irrational blindness of the sixteenth century unacceptable to our present society, and on the other hand, we find the materialism of today increasingly unsatisfactory and literally dangerous. We seem to be thrown between two extremes, both of which can no longer fit the expanded mental attitudes of mankind. The result is confusion and chaos.

Basically, we have come to respect the reliability of what we can call the natural sciences. Our experience has shown us that where we have met with nothing but tenuous, erratic vagaries in the field of mysticism, we have found a comforting substantiality in the field of science. As one person put it, "Science is material; religion is immaterial." Actually, whereas the revolt of science began as the legitimate birth of a new method for finding the truth, its popularization was the result partially of its ease. That is, the tedious and difficult process of thinking became all but eliminated. It meant that with a relative minimum of abstract thought results of a satisfactory nature might be attained. Though true science requires an element of mysticism or philosophy to be more than a hodgepodge of meaningless data, science as known by all but a few hidden individuals is practiced without real thought. It is a boon to the mediocre, because it makes an "ass bearing gold" appear to be other than an ass bearing gold. It allows us to *bear* television sets and atomic bombs without thinking about *how* to use them. In the words of Albert Schweitzer, "It will ever remain incomprehensible that our generation, which has shown itself so great by its achievements in discovery and invention, could fall so low spiritually as to give up thinking."[1]

Science, in the creative, open sense requires a great deal

1. Albert Schweitzer, *Out of My Life and Thought,* p. 222.

of exploratory, even intuitive thought, but science as conceived generally is the anti-Christ to thought and by such a contradiction. It is at once the essence of advancement and the power of retrogression, depending upon whether it is understood or misunderstood. When a scientist refuses to accept scientific evidence on the basis of prejudice (as occurs regularly), whether admittedly or not, he is helping to destroy the thing he purports to champion. Such men proved mathematically that a railroad engine would not operate on smooth tracks, that the airplane could never fly (Simon Newcomb the astronomer), that man could not biologically survive the tremendous speed of twelve miles an hour, and that rockets could not operate in a vacuum. We may laugh at such attitudes now or wonder at the stupidity of it all, but the men who made such proofs or statements were no crackpots. Instead, they were the distinguished and intelligent authorities of their day. It was the crack pot who braved the storms of abuse to produce the luxuries which the academics were unable to visualize. It would almost seem that the people who wanted to burn Galileo had decided to infiltrate science and destroy it from within.

By the end of the nineteenth century, then, man had become so hopelessly taken by materialism that all attempts to alter the situation were doomed to failure. Auguste Comte's synthetic religion came to nothing and the aesthetic squeeze drove men such as William Morris to revolt. Pessimism about life in general ruled much of the time since science took the reins in spite of the advances and luxuries it provided, with Schopenhauer heading the list. Soon men such as Shelley, though not strictly pessimists, were calling out in realization of man's depressed state, "If Winter comes, can Spring be far behind?" (Ode to the West Wind) and later Erich Maria Remarque pointed to the flow of blood in horror. Man not only was falling helplessly into a trough overflowing with his own blood but was doing so without the nobility of his own character, for science was proving

him to be no more than an inept primate without soul or cause. We might even hear the words of Francis Bacon calling out feebly from the grave against the tide which had enveloped the world, "Men are not animals erect, but immortal gods."[1]

Then, all of a sudden, a change took place, stupendous in its import but subtle in its approach. Two men, Michelson and Morley, performed a scientific experiment which spelled the doom of materialism as we know it. Five hundred years of physics were sacked on the spot, though many minds were to succumb before the truth would be able to manifest itself. Yet, it could not be denied when atomic explosions shook the foundations of man's earth. The pendulum had reached its apex.

In this important experiment, called the interferometer experiment, Michelson and Morley demonstrated that light does not behave according to the accepted laws of Newtonian physics. Perhaps we can best understand what happened if we first consider in simple terms the Newtonian system overthrown (specifically, velocity) and then proceed from there to the interferometer experiment and relativity.

That is, if a man were on a train traveling fifty miles per hour and threw a baseball forward at the rate of fifty miles per hour in the direction the train were traveling to someone standing still on the ground by the tracks, the catcher would logically receive the ball at the speed of the train (the baseball's initial velocity) plus the speed given to the ball by the thrower, or in other words, one hundred miles per hour. Likewise, if he threw the ball to the rearward direction of the moving train again at fifty miles per hour, the catcher would receive the ball at no velocity (just dropping due to gravity) since the man's rearward throw of fifty miles per hour merely counteracts the train's forward speed of fifty miles per hour. This is called addition of

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1. Will Durant, *The Story of Philosophy*, p. 143.

vectors and was a Newtonian concept assumed with respect to all things because of its obvious and easily demonstrable truth.

The effect of the Michelson-Morley experiment was to show, however, that this addition of vectors does not hold true with light, which travels at relatively high speeds (approximately 186,000 miles per second or 669,600,000 miles per hour). It was proven that, for instance, the light from the train's headlight would reach him at the same speed regardless of whether the light were reaching him from the oncoming train or from the train going away from him. That is, contrary to what we had assumed with vector addition of Newtonian physics, light would reach the catcher at 669,600,000 miles per hour and not at 669,600,000±50 miles per hour. This was the revolutionary discovery of the interferometer experiment. It was the mother of the Theory of Relativity and more indirectly of the atomic bomb.

Yes, one after another, unshakable axioms began to fall, and the sound structure of finality in physics fell piece by piece. Once again the world was beginning (just beginning) to question its reliance on materialism, and the way was opening for the birth of a new age.

"Truth generally lies in the coordination of antagonistic opinions."

Herbert Spencer

THE NEW APPROACH

Our age has often been thought of as an age of enlightenment, with the general feeling being that today we can be sure of things, thanks to science, because we can prove or disprove them scientifically and thereby be freed of doubt and superstition. In this manner, we have built up a proof psychosis, or in other words, an attitude of absolutism.

The common conception of proof today appears to be that one has merely to feed information into some machine and watch the various dials for results or that anything can be clearly shown to be one thing or the other. However, what is proof to one is not to another, and though we usually think of this only in reference to unscientific everyday occurrences, it applies equally true to any thing or event. Our reliance on science has grown to such an extent that whereas it should be a useful tool for studying nature, it has become a god, absolute and unquestionable.

Whether we are studying social reactions or physics, *proof is* no more than a temporary state of the mind in which an observer has reached a plane of acceptance. To say that there is any such thing as a final proof is erroneous, for such a thing implies that all the facts and relationships are known. We might say that proof and faith are identical.

For instance, a body falls toward the earth with a velocity expressed by the equation $\frac{1}{2}gt^2$. It is an expression of the law of gravity, which supposedly grew out of Isaac Newton's experience of watching an apple fall, and to most people it is a perfect sample of a proven fact. But what is

it actually? Is it an absolute and universal law or is it merely an expression of something we hold on faith to be true . . . until proven otherwise?

We know, simplifying the picture considerably, that for thousands of years men have shot arrows into the air, and that no one has ever recorded a time in which an arrow so shot failed to return to the ground. People have dropped objects from the leaning tower of Pisa, from airplanes, from ships at sea, from mountain ledges, in a near vacuum and under all sorts of varying conditions. We assume that thousands or even millions of observations have been noted since the beginning of man with (for the sake of argument) never an iota's worth of deviation from the inverse law of attraction or the expression $\frac{1}{2}gt^2$. We therefore may state with impunity that such relationships are proven facts. We may even go farther to state that such will always be the case under similar conditions and so develop a proven scientific fact, inviolable and safe from alteration.

Then suddenly, and this has not happened we trust, an arrow is shot into the air and does not return. What has happened? It means, simply, that we have not tested or observed long enough. Our equation has an unknown factor, *X*, which we had not known because we had not observed long enough to witness its effect; and whatever we do, we must realize that any such equation can be only the result of the observation of events, dozens, hundreds, or thousands of times, depending upon the number necessary to satisfy the observer that a fact has indeed been established. As such, it can only be a probable line of future action. We might test something a million times without a trace of variance, but we can only *believe* or have faith that on the millionth plus one time a variance will not show up. In other words, the only difference between proof and faith is that proof is the term used by those who have enough faith to transcend a state of doubt. A fact, then, is that

temporary or permanent truth accepted by virtue of an abundance of faith, nothing more.

Many are not able to see this temporary or fallible nature to what is called proof, be it scientific proof or axiomatic proof, but such is the immediate, natural reaction from being cultured in an environment in which the absolute proof concept is axiomatic itself. For hundreds of years man has accepted Newtonian physical law as being common sense and doctrinal, but recently we have found that by and large it is only apparently true. We may not like it, for instance, but light does not behave according to common sense. Fortunately, experimental evidence has left us little room to doubt in this case, and we have had to accept the change, like it or not. To realize that all our ideas of length, time, and mass have become obsolete and that what we used to think of as being so obviously true is now only apparently true under some conditions is not the easiest thing for us or any man so educated to accept. Yet, such is the case. Furthermore, since most of us still do not comprehend even the basic revolutions in physical thought, we can certainly expect to have to revise our thinking for some time to come on this one point alone. Proof, then, is really quite an elusive thing, relative, transitory, and dependent.

This brings us to another questionable term which has been the point of much controversy; that is, reality. Many assume a knowledge of the materialistic concept and use it loosely in various arguments without stopping to consider that it has never been adequately tied down. That is, we accept it as axiomatic without any grounds other than our inclination to so use it and proceed with other points. Few question it because of the tangle its consideration poses to the inquiring mind, and those who do usually become so confused as to be more than happy to acquiesce and accept the materialistic definition as axiomatic. This, in turn, leads, unfortunately, to solutions which *may* be erroneous, but the

worst thing about it is, of course, that seldom are the questionable aspects of the basic premise considered as capable of introducing an error, when the solution is so confidently expressed.

The greatest single evil of our age is that of materialism, and this, in turn, hinges entirely on a false concept of reality. As generally conceived, reality is the bastard child of science, for though it is a product of the scientific age, it is not the legitimate product, having been so unscientifically assumed in the first place. It has plagued the advance of its parent, science, continually, especially in the recent nuclear phase, as such a child so often does, and only recently has a widespread question arisen in scientific circles on this point, leading the way to a re-examination of our approach, though still negligible and hardly touched. Modern man cannot afford to minimize this point, for only the deepest and most touching, critical self analysis can help us out of our present dilemma. Naturally, we cannot expect man to grasp the real danger without first viewing the hidden problem with inattention and ridicule. After all, if the true problem were at all obvious, man would not be in his present situation, since, he would be able to recognize it and therefore eliminate it. A person with a psychological problem seldom has the remotest awareness of the true seat of his problem. As a matter of fact, his mind goes to extreme lengths to disguise its struggle by substitute manifestations. Consequently, the problem, when proposed, will naturally not seem to be the correct one. It is easier to blame all the trouble on some political party, some disliked nation, or indigestion. Materialism, however, is the true problem and will remain so until sufficient effort is made on the part of man to sweep it away.

Let us, then, look at the problem critically and try to discover what there is about it that poses such a confusing picture to man. That is, why is it that we cannot seem to conquer materialism but have allowed it to conquer us?

Throughout the world materialism has its strangle hold on men and blinds them into an accelerated and frenzied lust, driving rationality from their minds and pouring their blood on the thing their delusion covets . . . the earth. Some say the problem manifests itself most in this place or that place, in this nation or that nation, but in reality, it lies, with little variance, as a blanket over the entire globe. Nations pretend to buy friendship, others pretend to sell friendship, and others disclaim both while playing one against the other to their own benefit, but the apparent and real benefits of those materially successful peoples has taken its hypnotic grasp on all but the remotest few. The problem lies, therefore, not in the errant ways of a particular people but in the conceptual immaturity of man as a whole and means that he must examine his most basic premises.

In this day of modern science the word real has come to mean that which is sensually perceived. If we can touch, see, taste, smell, or hear an object or its effects, it is considered to be real; otherwise not. Science has taught us that the universe is composed of material entities, broken down into atoms or even farther, and that everything that "is" is made up of these entities and is substantial; anything other than this is either some effect of these entities or else a figment of the imagination, unsubstantial and unreal. To a certain extent, such a definition is correct, but there are also grave misrepresentations and errors connected with it. For instance, it leads to a reliance upon the material aspects of the universe to such an extent that no consideration is given to anything else. Even in spiritual matters, if a materialist desires, for some human reason, to champion a spiritual concept or ideal, he builds a materialistic framework for his ideal in such a way as to explain its presence or its validity. He seldom is willing to accept it on other terms and cannot rest until his ideologic framework has been thoroughly fashioned and tested. This, in turn, is not entirely the wrong approach, for it is definitely the

natural position of man's present mental status to reason in this manner. It is the result not only of a monopolistic reliance on material substantiality but also of an indefinite and uncoalesced logical alternative. Though man might welcome another approach, he cannot be expected to do so until he can find one which is logical. For this particular reason, a logical alternative is not only desirable and necessary, it is the natural next step.

The table, sitting in front of us, or the chair or some other substantial object is to us, real. It takes little place in our thoughts for the most part, but when a discussion of the nature of things begins to enter into the realm of the spiritual or the emotional or the conjectural, the materialist is often apt to suddenly grasp the table or chair and say, "This is here. That I know. What you are discussing may or may not be true, but this is real. Anything else is superstition." Naturally, this "irrefutable" argument is supposed to and often does end the discussion in question, but such is certainly not rational and is made from fear rather than the spirit of progression. To rely on this substantiality is far from logical where such substantiality is used in comparison against less substantial things.

As an example, we might examine the particular substantial object referred to above. The table is, we know, but a closely knit organization of various molecules, including gas molecules or atoms of the penetrating air, but this tightly packed mass is not so tightly packed as we might imagine. To a relatively minute observer, it would probably appear to be quite extravagantly spaced. Then, these molecules themselves are composed of even more minute particles called atoms, spaced from each other at relatively great distances. Breaking it down farther yet, we can know that these atoms are, in turn, composed of a myriad of extremely minute particles known as electrons and so forth. The table, the chair, the air we breathe, we, ourselves, are composed of no more than these finest entities. All, includ-

ing the molecules and atoms, are identical in their last analysis . . . they are electrons and protons, etc. and no more, because between these particles there is nothing, no air, no gas . . . nothing. We look around us or look up, and we think of nothing, trying to conceive of such an "unthing," but still, when we think we finally understand what is meant by nothing, we are thinking usually of something. We are still thinking of air, invisible but substantial when in actuality, nothing is completely unsubstantial or unreal.

However, we still have this tiniest particle, the electron, to consider as substantial if we are going to maintain our materialistic concept, because, as we can see, this tiniest entity *is* material and material is only this tiniest particle. There is, in a word, nothing else. We must continually bear in mind that in all we know and see, the table, the chair, ourselves, the air, the mountains, the seas, the stars, there are only these tiny elemental entities. There is nothing else within them, around them, or beside them. To a materialist there can be nothing else. What then, are these things of which everything is made?

The electron, simply, is nothing and at the same time it is something. As we peer ever farther into the microcosm, using various instruments such as the electron-microscope, we see many things, but one thing we do not see is the electron. We cannot see, feel, taste, hear, or smell an electron, and left entirely to our senses, we would have to conclude that it does not exist and that we, in turn, do not exist. What we once thought to be real and substantial begins to disintegrate conceptually into fields of force, mathematical relationships, and curves of probability. We find that, as Lincoln Barnett says, "in the abstract lexicon of quantum physics there is no such word as 'really'."[1]

Our general conception, then, of real is not nearly as final as might be supposed. Similar to what Hume or

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1. Lincoln Barnett, *The Universe and Dr. Einstein,* p. 35.

Spencer might argue (independently, of course), reality is an apparent thing. It is an inferred result of sensual perception, and at the same time, it is unprovable.

To modern man, however, to say that material is unreal is not enough, nor is it enough to say that nothing is provable. All this is an important logical step in the right direction of truth, but it begins to border on false logic when standing alone, because it seems to put us at odds with our obvious, everyday reality. We *are*. To say that we *are not* makes little sense by itself. It can only make sense in a continuous chain of logic approaching a sensible solution; for obviously, in some sense, we *are*.

Sir James Jeans, the great British physicist, said, "The hard sphere has always a definite position in space; the electron apparently has not. A hard sphere takes up a very definite amount of room; an electron—well it is probably as meaningless to discuss how much room an electron takes up as it is to discuss how much room a fear, an anxiety, or an uncertainty takes up."[1] From this we can see that even the hard sphere does not take up a definite amount of room in a sense, for it is made up of these intangible electrons. So, if we are going to challenge the reality of the electron, we must challenge the reality of the hard sphere, because the hardness of the sphere is but an apparent sensation, dependent on things and relationships which have no such hardness. At the same time, we go on living, real to ourselves at any rate. As has been stated before, in some sense, we are.

It is interesting to study philosophers of the past and observe how much truth can seem to be possessed by them while often disagreeing in a diametrically opposed manner, and one of the important points of this book is to show the logical coexistence of opposites, which appear opposite due to lack of understanding. In the matter of reality, for in-

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1. Lincoln Barnett, *The Universe and Dr. Einstein,* pp. 30-31.

stance, it can be argued that we are real, but it can be shown also that we are not real. One seems to be incompatible with the other, while in actuality, it should become obvious that most of the confusion lies in our idea of what we mean when we say, "real."

The truth of the matter, then, is this: it is not that there is no reality, but rather, that what is real is not dependent upon what we can grasp with our outer senses. If it is as meaningless to discuss the sensual reality of a fear or an anxiety as it is of an electron, then it is as *meaningful* to discuss the reality, sensually or not, of a fear or an anxiety as it is of an electron. The error in modern man's approach is not in his acceptance of material nature, but in his rejection of the nonmaterial elements. Yes, we *are,* but so *are* many very intangible things.

Our approach must now broaden out to include all that occurs in nature. It might be called the naturalistic as opposed to the materialistic stand, but it must involve the concept that what is intangible or fleeting is or can be equally real and significant to what is material or substantial. Nothing can be supernatural in this new approach since intangible things or relationships are as real as material and take their rightful place in the logical scheme of natural occurrence. For us to deny a proposition that a certain thing is real or natural for the reason that it is not materially constituted or effected is not rationally valid or scientifically accurate.

Furthermore, man must realize that there is a great deal in the universe of which he is unaware. Fred Hoyle, in his *The Nature of the Universe,* states, "Is it possible that the cosmology of 500 years hence will extend as far beyond our present beliefs as our cosmology goes beyond that of Newton? It may surprise you to hear that I doubt whether this will be so. I am prepared to believe that there will be many advances in the detailed understanding of matters that still baffle us. . . . But by and large I think that our

present picture will turn out to bear an appreciable resemblance to the cosmologies of the future."[1] Now, depending on whether or not man matures rapidly enough to survive the next 500 years as an advancing civilization without destroying himself, and upon how broadly one interprets such words as, "detailed understanding," or, "appreciable resemblance," in the above quotation, the challenge as to this viewpoint is too much to resist. Man seems to always think that he has reached the ultimate of learning or at least so close to it that there is little more to discover or learn than certain details. This is, of course, quite natural, because being generally unaware, as he is, of those things which he has not discovered, he is not apt to put much consideration on them. He is, so to speak, so wrapped up in the things which he has discovered that he is not disposed to consider that which he has not discovered. It is easy to look back and explain how an individual discovered something but difficult to think of something of which no one is even slightly aware. Newton could very easily (and probably would have) felt the same way as Mr. Hoyle, since he had no way of being aware of the revolutionary changes to take place in the Theory of Relativity. To Newton, the fundamental basis of all future physics was being laid then and there. Many improvements and details would be developed, but anything of such abrogative or radically new a nature was undoubtedly inconceivable to the mind of Newton 500 years ago. Actually, there are so many cases of this type of thinking catching scientists out on a limb, one would think that tree climbing of this nature would have gone out of fashion long ago.

E. E. Slosson, the chemist, said of this, "For instance the great French mineralogist Hauy wrote at the beginning of the 19th century:

'Electricity, enriched by the labor of so many dis-

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1. Fred Hoyle, *The Nature of the Universe,* p. 121.

> tinguished physicists, seems to have reached a time when a science has no more important steps before it . . .'

But we count this the beginning of our knowledge of electricity rather than its end, for over in London at this very time young Michael Faraday . . . was working out the relationship between electricity and magnetism which has led to the dynamo and the radio. One might think that such a blunder as this would have made later scientists cautious about thinking that nothing more remained to discover, but no, for we find in 1894 the catalog of one of the largest universities in the United States publishing at the head of its list of courses in physics the following discouraging statement:

> 'While it is never safe to affirm that the future of physical science has no marvels in store . . . it seems probable that most of the grand underlying principles have been firmly established and that further advances are to be sought chiefly in the rigorous application of these principles to all the phenomena which come under our notice. . . . An eminent scientist has remarked that the future truths of physical science are to be looked for in the sixth place of decimals.'

But the very next year Roentgen discovered the X-rays that led to radium and the electron."[1]

Arthur C. Clarke, Chairman of the British Interplanetary Society, said, "One hundred and fifty years ago, distinguished mathematicians demonstrated that the new-fangled steamships could never cross the Atlantic—the coal consumption would be far too great. A century later, the birth of flight was preceded by a similar chorus of Cassandras—most famous of whom was the great American astronomer Simon Newcomb. (In 1903 Newcomb wrote a paper which

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1. E. E. Slosson, *Chats on Science,* pp. 130-131.

should have convinced the Wrights, had they read it, that they were wasting their time. Even five years later the good professor was still stoutly maintaining that an aeroplane could never carry the weight of a passenger as well as a pilot!)

"The lesson of this is that it is never safe to make what may be called 'negative' prophecies in the field of scientific and technical achievement. Even if all the known facts are correctly marshalled—a much more difficult feat than may be imagined—and a certain line of procedure is shown to be unprofitable, alternative solutions usually turn up in time."[1]

Modern man, far from having exhausted the potentials of discovery, either in the physical universe or in the knowledge of its operations, is but standing on the edge, glimpsing into a fathomless pool of secrets. Things will be found which will not only be revolutionary, but which will seem ridiculous when first proposed. Nonetheless, man will progress and the universe will yield its truths . . . one by one but never quite fully. Just as apples fell from trees long before Newton's fateful encounter, things are happening around us and throughout the immensity of the universe which, though ignored or unseen today, will be formulated tomorrow and recognized as natural laws.

1. Arthur C. Clarke, *The Exploration of Space*, p. 38.

"For I dipt into the future,
far as human eye could see,
Saw the Vision of the world,
and all the wonder that would be."

Alfred, Lord Tennyson

BEYOND THE ATOM

A MAN is sitting at his desk reading a progress report when suddenly he sees, flashing deeply and vividly across the inner recesses of his mind, the vision of a plane crashing in flames. He knows that on this plane is his brother, somewhere in the Pacific, struggling for his life, and in this moment of visionary pause, the man experiences the horror of death, brief but unforgettable. Not able to throw it off as imagination the man is too shaken to continue working and returns home to rest, but later his friends assure him of the harmlessness of his imaginative fantasies, and he laughs in relief, realizing the humor of his taking the whole thing so seriously. Then, three days later a telegram arrives to inform him that his brother was killed in a flaming plane crash near Oahu.

In 1898, fourteen years before the tragic sinking of the steamship Titanic, a novel was written (*Futility* by Morgan Robertson) describing almost detail for detail the sinking of the Titanic as it was to happen. In this novel, the ship, like the Titanic, was supposed to be unsinkable; it carried a particularly wealthy group of passengers; it struck an iceberg and went down soon after; much life was lost needlessly due to a shortage of life boats; it was the newest and largest ship afloat; and, it sank on a cold April night. The name of this fictional predecessor of the fated Titanic was, by very remarkable coincidence, the Titan.

Slightly over a hundred years ago Sam Chamberlain wrote in his diary of the Mexican war, "Lieutenant Rodney

Ferguson of the Second Illinois was an intimate friend of mine. He had given me the address of his mother and a twin sister in Springfield, Illinois. He was slain by a lance thrust in the attack on the train (Buena Vista) and I duly informed his family. Three months later I received an answer, relating a most extraordinary occurrence. On the afternoon of the 23rd of February 1847, Mrs. Ferguson was engaged in housework and her daughter was reading in the sitting room, when suddenly the girl gave a shriek and swooned. On being restored she said, 'Oh, mother, Rodney is dead,' and described a vision in which she had seen him run through with a spear. She complained of a severe pain in her left breast and in 36 hours she too was dead!"[1]

Such events as these described above are but a portion of countless similar experiences happening everyday to men and women throughout the world. More often than not they happen to us so mildly as to pass by unnoticed, but every once in a while, the coincidence is too remarkable or serious to pass off, and we are forced to think about it for a time at least. To most modern men, such occurrences are explained as coincidences or accidents of nature, because it would seem to be incompatible with sensible scientific knowledge were it anything else. However, though the major part of science does not recognize anything other than coincidence in such matters, there is absolutely no scientific justification for the denials of something beyond coincidence, which are used so haphazardly by people professing scientific authority. Of course, one seldom hears these denials from any individual who has had personal experience with the more poignant type of this phenomena, but those who do voice their denials usually consider other opinions as the product of superstitious minds. It matters not that their own opinion is irrational and without scientific basis;

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1. Sam Chamberlain, "My Confessions," in *Life* magazine, July 30, 1956, p. 64.

to them, science and materialism are assumed to be synonymous, when in actuality one does not necessarily even involve the other. One may justifiably reject any alternate solution to that of coincidence but only on the basis, as a few less hypocritical ones have done, of pure biasness, for at the present time, there is no possible evidence to support these denials on any other basis.

At first overpowered by the irrational opposition to serious consideration of anything supraphenomenal, man continued to cling to the ease of a purely material universe, but under the growing pressure of contrary evidence, the more rational minds began to question such a supposition. A group of scientists and sympathizers formed the British Society for Psychical Research (1882) for the very purpose of studying scientifically any kind of supraphenomenal occurrence. Though no very concrete results could or were attained, enough came out of it to convince a number of initially skeptical men of the existence of real, psychical events. In our own country, some similar things have been attempted, though usually with more specialization, and is probably most popularly associated with the work of Dr. J. B. Rhine and his parapsychology laboratory at Duke University. For a number of years now Dr. Rhine and his associates have been using scientific methods to test such supraphenomenal occurrences as clairvoyance, mental telepathy, mind-over-matter control (psychokinesis) and other forms of what is sometimes called extrasensory perception. His methods hinge primarily on the use of the mathematical laws of probability to show the scientific improbability of such results occurring accidentally, and though only a minor (but significant) portion of the closely related science of psychology accept the findings as conclusive, Dr. Rhine's mathematical techniques of testing are upheld by the American Institute of Mathematical Statistics. His experiments, described interestingly and informatively in several books, including, *The Reach of the Mind* and *New Fron-*

tiers of the Mind (William Sloane Assoc.), will probably be recognized someday as one of the most important steps in modern times, due to the break they will help to make on the strange hold which materialism has on modern man.

Fortunately, now we are beginning to have a scientific awakening to the fallacy of the pure and strict concept of materialism, and though it will probably be a long time before the few pioneers can unburden the masses of their oppressive load, the difficult first steps are being taken with courage.

At the same time, one of the difficulties will be to prevent the pendulum from swinging irrationally to an antipodal position. Though the materialistic point of view is false, material itself is not, because, as has been shown, recognition of the reality of the nonmaterial or noumenal does not reject or destroy the reality of the material. It is not wrong to grasp the table and say, "This is real. That I know." It is only wrong to assume that the table is any more real than nonmaterial things.

In the light of this thought, then, it should be remembered that extrasensory perception does not mean extra or supranatural (i.e. supernatural) perception, because the nonsensory or noumenal element is quite real and natural. Unfortunately, many minds operate on the assumption that what is not black is necessarily white, or, in this case, that what is not material is necessarily nonexistent, but in both situations, there are other possibilities. Therefore, the term extrasensory perception is erroneous unless one is willing to limit sensory as applying only to the five known senses. Mental telepathy and clairvoyance, for instance, are actually occurrences of a sixth and uncatalogued sense and are not extrasensory at all.

Prophecy or prediction, such as in the case of the book, *Futility*, described earlier, is a particular form of psychic phenomenon which has been under debate for untold ages. Today little official credulity is given to the possibility of

its being a genuine phenomena for the same reasons discussed in reference to the materialistic philosophy; however, some strides have been taken in psychical research which tend to support the validity of prediction indirectly. That is, not only have tests shown us that psychic phenomena exists, at least in some forms, but they have given us, clinically, a clearer picture of some of its workings and opened the way to a relationship connected to prediction or prophecy.

Tests indicate that where clairvoyance is concerned, time is unimportant. That is, a person may perceive clairvoyantly a situation sensually imperceivable to him, but that whether the situation so perceived is in the present, the past, or the future is unimportant to the fact that of the clairvoyant perception itself. Consequently, clairvoyant perception of a future event is called precognition while clairvoyant perception of a past event is called postcognition, the difference being one purely of semantic convenience. This means, of course, that one may, under certain circumstances, travel both forwards and backwards in time, leading on the one side to what is called prediction or prophecy and leading on the other side to a belief in reincarnation. Both are directions of the same road leading to similar cities of different names.

One of the most frequent objections to recognition of precognition or prediction is that of its inaccuracy. A person may predict a ship collision, for instance, but sees it striking an iceberg when in fact it may strike another vessel. To the critical observer, then, this seems to invalidate the precognitive experience and place it in the category of coincidence. It would seem, they argue, that a genuine prophetic experience would necessarily be accurate, whereas, any major inaccuracies implies a measure of luck on the several or few coincidental accuracies. Unfortunately for such an argument, known parallel situations indicate practically the reverse of this line of thought. As an example, memory is frequently quite inaccurate. Two persons may

experience physically an event, leaving no doubt as to the validity of the experience, but report conflicting stories of what happened. One may say that an object was red, while another will testify that it was blue; sometimes, in fact it turns out to have been neither. Such inaccuracies are not only frequent, but are used in police work to indicate truthfulness of witnesses. Contrary to upholding accuracy of memory to validate the reality of the experience, judges will often use inaccuracy as a yard stick of truthfulness, saying, "If witnesses agree, someone is lying." Therefore, we can see how inaccuracy in a known thing such as the memory process, in which an individual does not have to rely on some fleeting vision but has actually witnessed the physical event in person and then reported inaccurately, not only happens but usually does. It follows, then, that in the case of precognition, it is not unreasonable to expect an even greater degree of inaccuracy without consequently invalidating the experience.

Of all the types of psychic phenomena, probably the most difficult to ignore is this phase of precognition, since very few individuals escape experiencing it at some time or another. For most it is sufficiently vague to be either mistaken as coincidence or so argued into, but even the materialist often has his moments of serious reflection. He may explain it as a material manifestation of some undiscovered form of electromagnetic wave length, but he has a difficult time, sometimes, to dismiss it entirely, especially when the complex of factors appears to reach well above the chance level.

Though precognition, as has been explained, is not an infallible process, due to the ever present human element, several historic examples exist to indicate how at least a remarkable accuracy can be attained. One of the most noted examples is that of Nostradamus, whose ability to foresee future circumstances is difficult to deny even for the mate-

rialist, but perhaps the greatest number lie in the field of religion, where precognition or prophecy not only takes a prominent role but is an integral part of the religious teachings themselves. Nostradamus, even, might well be considered a religious seer since his material was supposed to have been derived religiously, and perhaps others such as Swedenborg are of the same class, either directly or indirectly, though some were not under the pale of recognized religious orthodoxy. Among South American Indian tribes and among many other primitive peoples in the world, various drugs are used to induce a state of trance in which precognition is sometimes facilitated for religious purposes.

Since precognition plays such an important role, then, in religion and since orthodox religion has been the victim of the materialistic philosophy, precognition has come into general disrepute more because of its religious association than anything else. At the same time, due to this close association, logical recognition of one will have its effects upon the other and will facilitate investigation; and, though precognition is not a necessary element of religion nor religion a necessary companion to precognition, the usual association of the two indicates strongly that there are common factors involved. For this particular reason, the scientific study of precognition may serve as the very important secondary purpose of mediating the eventual reconciliation of science and rational (intellectually compatible) religion.

The realization of this relationship between precognition and religion, therefore, undoubtedly has its implications, but it must not allow a possible anti-religious bias to interfere with a study or acceptance of precognition itself. Precognition is a fact. It is even, now, a scientific fact, in spite of the denials of many scientists, and it will lead an increasingly more important role for years to come as it picks up more recognition. To deny it is certainly a comforting thing for those interested in hanging onto the ease of materialism,

but one might as well deny that the earth revolves around the sun.

On the other hand, if precognition is a fact, it is not logical to single out religious precognitive experience for skeptical treatment. Though one may not desire to recognize the validity of religion, its precognitive aspects are as difficult if not more difficult to deny on anything but grounds of pure bias than the nonreligious precognitive experience. Not only have the most noted examples been religious ones, but the accuracies involved usually border high on the remarkable side. Though frequently described in terms so gross and allegorical as to appear ludicrous to modern minds, it was the way in which the people thought in their day. To expect a man of two thousand years ago to describe a vision of an atomic bomb in scientifically accurate terms is being much less than fair. Even we, brought up in a scientific age, could not be expected to do much better, and in one of the following examples, a modern American reporter describes an atomic explosion in the same allegorical terms that a several thousand year ago prophet might have done. At the same time, an actual religious prophecy of ancient origin is compared with it, showing almost identical allegorical terms.

To illustrate this, and the general proposition of precognitive or prophetic insight, a series of comparisons are given on the following pages. In each case, a religious prophecy is compared with a modern quotation concerning what may be or could be the actual event prophesied. Though an individual case or two may appear to be incorrectly compared, the general totality should appear significant enough to indicate a genuine prophetic insight into our present chaotic dilemma, known to the ancients as the end of the world or more properly translated, the end of the age. A measure of support for this conclusion should also become apparent from the fact that many of the ancient prophecies

were, until the advent of nuclear fission, impossible of being fulfilled literally (such as the stars falling on the earth). The amazing way in which some of these, in particular, seem to be now made possible, is indeed remarkable to say the least; but they are, however, here presented without further individual comment to suggest what they may.

"Heaven knows what seeming nonsense may not tomorrow be demonstrated truth."[1]

A. N. Whitehead

1. A. N. Whitehead, *Science and the Modern World,* p. 116.

PROPHECIES AND REALITIES

THE FOLLOWING chapter is made up entirely of religious prophecies concerning what is variously called, the end of the world, or the end of the age, etc. and parallel modern quotes of actual events as they happened and were described later. Most students of the major religions represented agree that the time of the fulfillment of these prophecies (by studies of other prophetic statements about the time of the end, such as in *Daniel*) coincides with our own day, and one cannot help but be struck by the way in which not only do the events fit the prophecies but also the similar allegorical description used by the authors thousands of years ago and today. It shows how, at least, such fantastic prophecies are in no way exaggerated from the possible.

1. KRAKATOA 1883

The Lord also thundered in the heavens, and the Highest gave his voice . . .—*Psalms* 18:13

It was, in the conservative opinion of the Royal Society of London, "the mightiest noise which, so far as we can ascertain, has ever been heard on the globe." It was, said a Christian missionary, "the visitation of God's anger."—*Pageant* 1954

* * *

. . . and he shot out lightnings, and discomfited them—*Psalms* 18:14

. . . St. Elmo's fire appeared on masts [near Krakatoa] and rigging, frightening the natives no end. "Lightning

struck the mainmast-conductor five or six times!"—*Willy Ley* 1949

* * *

. . . and the foundations of the world were discovered at thy rebuke, O Lord, at the blast of the breath of thy nostrils—*Psalms* 18:15

For its equivalent the volcanic geologists have to go back to eons long before mankind, when the earth was one ball of fire—*Pageant* 1954

* * *

. . . and the moon (shall be turned) into blood . . .—*Joel* 2:31

One afternoon the sun turned "blood red" in a place called Hiroshima—*Pageant* 1954

While on October 17th, the *Glencairn* . . . notices "a very broad ring round the moon of a dark reddish colour;" —*Royal Society* 1888

* * *

The sun shall be turned into darkness . . .—*Joel* 2:31

Such was the thickness and the density of those atmospheric volumes of Krakatoa dust that for a hundred miles around the darkness of midnight prevailed at midday—*Sir Robert Ball* 1902

* * *

The day when the sky will become as molten copper . . . —*Koran* LXX:8

We saw smears or patches of something like verdigris-green in the sky, and they changed to equally extreme blood-red, or to coarse brickdust reds, and they in an instant passed to the colour of tarnished copper or shining brass . . .

. . . the sun on September 1st-5th was surrounded by a light atmospheric film of a coppery hue . . .

At Fanning Island, on the same date, the sun was copper coloured . . .—*Royal Society* 1888

And thou seest the hills thou deemest solid flying with the flight of clouds . . . —*Koran* XXVII:88

An overture, consisting of two or three introductory explosions, was succeeded by a frightful convulsion which tore away a large part of the island and scattered it to the winds of heaven—*Sir Robert Ball* 1902

* * *

And there fell upon men a great hail out of heaven, every stone about the weight of a talent . . . —*Revelations* 16:21

Much of it simply dropped down again on the ocean and on ships and on the neighboring islands, a steady rain of lava, ash, solid chunks of rock and earth and a weird phosphorescent kind of hot mud—*Pageant* 1954

* * *

KANSU (China) EARTHQUAKE 1921

. . . ye shall see the abomination of desolation, spoken of by Daniel the prophet, standing where it ought not . . . —*Mark* 13:14

The traveler over these wastes of earth, under which are buried villages, farmsteads, stream-beds, and road-beds, is overcome by the weird feeling that he is on some planet still in the formative stage. The horses appear to have an equal sense of the uncanniness of the situation and cannot be persuaded to leave the few trails which have been pounded down over the soft, dry, treacherous earth—*National Geographic Magazine* 1922

* * *

On the day when . . . the hills become a heap of running sand—*Koran* LXXIII:14

A quarter-mile section of an old road . . . carried on the back of the river of earth for nearly a mile . . .—*National Geographic Magazine* 1922

* * *

And the mountains move away with (awful) movement —*Koran* L11:10

Mountains that moved in the night . . . made the earthquake in Kansu one of the most appalling catastrophes in history—*National Geographic Magazine* 1922

* * *

. . . and there was a great earthquake, such as was not since men were upon the earth, so mighty an earthquake, and so great—*Revelations* 16:18

The loss of nearly two hundred thousand lives and the total destruction of hundreds of towns and cities . . . Likely no other earthquake in scientific annals ever changed the *physical geography* of the affected region to the extent of the Kansu cataclysm—*National Geographic Magazine* 1922

* * *

GENERAL

Their children also shall be dashed to pieces before their eyes . . .—*Isaiah* 13:16

At Janovsky concentration camp, S S Obersturmfuhrer Gustav Wilhaus used to shoot at prisoners from his office window. Once, to amuse his nine-year-old daughter, he "gave an order to throw two four-year-old children high into the air while he took shots at them. His daughter applauded and yelled: 'Do it again.' He did it again."—*Time* 1946

* * *

. . . and the transgression thereof [on the earth] shall be heavy upon it . . .—*Isaiah* 24:20

Such camps as this Buchenwald mark the lowest point of degradation to which humanity has yet descended—*Life* 1945

* * *

Trust ye not in a friend, put ye not confidence in a guide: keep the doors of thy mouth from her that lieth in thy bosom—*Micah* 7:5

A Red farmer puts the finger on a Nationalist. The people

are urged to spy on their friends, to report "counterrevolutionaries" . . .—*Saturday Evening Post* 1951

* * *

For . . . the daughter riseth up against her mother . . .—*Micah* 7:6

In Chungking an accuser sent her mother to her death, shouting, "I beg the government to execute her so that she may no longer do harm to the people!"—*Saturday Evening Post* 1951

* * *

. . . and the children shall rise up against their parents, and shall cause them to be put to death—*Mark* 13:12

A special communist objective was to get children to denounce adults, particularly their parents—*Saturday Evening Post* 1951

* * *

. . . your young men shall see visions—*Joel* 2:28

. . . thousands of individuals began to see saucers instead of pink elephants . . . flying saucers have become a modern myth—*Outer Space* 1953

* * *

And ye shall hear of wars and rumours of wars . . .—*Matt.* 24:6

. . . mankind longs for freedom from wars and rumors of war—*President Eisenhower* 1955

* * *

For nation shall rise against nation, and kingdom against kingdom . . .—*Matt.* 24:7

World War I and World War II—Common History

* * *

Then the channels of water were seen . . .—*Psalms* 18:15

When the seas are poured forth—*Koran* LXXX11:3

And when the seas rise—*Koran* LXXX1:6

We must reckon with rivers and lakes as potentially terrible enemies. Sea disturbances—call them man-made tidal

waves—may well be a factor in the next war—*Adm. Luis de Florez* 1946

* * *

. . . and there shall be . . . pestilences . . .—*Matt.* 24:7

Again, we have the possibility of bacteriological warfare. . . . The advent of bacteriological warfare means that scientists and medical experts will now turn their attention, and their terrific know-how, to the spreading of disease for the destruction of life—*Adm. Luis de Florez* 1946

* * *

ATOMIC WARFARE

A strange and wonderful instrument exists in the earth; but it is concealed from the minds and souls. It is an instrument which has the power to change the atmosphere of the whole earth, and its infection causes destruction—*Bahá'u'lláh* before 1892

. . . warning about the contamination of the earth's atmosphere by radioactivity from bomb tests came in a report by the Federation of American Scientists. It should be clear, the report said, "that future accelerated H-bomb test programs by several atomic powers will ultimately reach a level which can be shown to be a serious threat to the genetic safety of all people of the world"—*New Yorker* 1955

* * *

Scientific discoveries have increased material civilization. There is in existence a stupendous force, as yet, happily, undiscovered by man. Let us supplicate God, the Beloved, that this force be not discovered by science until spiritual civilization shall dominate the human mind. In the hands of men of lower material nature, this power would be able to destroy the whole earth—*'Abdu'l-Bahá* 1911

The available weapons of destruction are of a kind such that no place on earth is safeguarded against sudden total destruction. . . . Let us hope that the abolition of the existing international anarchy will not need to be bought by a

self-inflicted world catastrophe the dimensions of which none of us can possibly imagine. The time is terribly short. We must act now if we are to act at all—*Albert Einstein,* 1950

* * *

And the stars of heaven shall fall, and the powers that are in heaven shall be shaken—*Mark* 13:25

And when the stars fall—*Koran* LXXX1:2

. . . should we build a whole lot of miniature suns of our own? This can be done, as you know, by disintegrating uranium in an atomic pile . . . the majority of stars are common or garden specimens like the sun . . .—*Fred Hoyle* 1950

As President Truman said, "The force from which the sun draws its power has been loosed against those who brought war to the Far East."—*The New York Times* 1945

* * *

On the day when the earth will be changed to other than the earth—*Koran* XIV:48

. . . glass formed by a blast of heat greater than the temperature at the surface of the sun. . . . This is the crater of the first atomic bomb [in New Mexico]—*Life* 1945

* * *

. . . when the earth is ground to atoms, grinding, grinding —*Koran* LXXXIX:21

Beneath it [the first atomic bomb in New Mexico] the ground has been crushed downward by a pressure greater than any ever to occur naturally at the surface of the earth—*Life* 1945

* * *

. . . I stood upon the sand of the sea, and saw a beast rise up out of the sea . . .—*Revelations* 13:1

By the time our ship had made another turn in the direction of the atomic explosion the pillar of purple fire had reached the level of our altitude . . . becoming ever more

alive as it climbed skyward through the white clouds. It was no longer smoke, or dust, or even a cloud of fire. It was a living thing, a new species of being . . .—*Life* 1945

* * *

. . . having (the beast) seven heads and ten horns, and upon his horns ten crowns, and upon his heads the name of blasphemy. And the beast which I saw was like unto a leopard, and his mouth as the mouth of a lion: and the dragon gave him his power, and his seat, and great authority.—*Revelation* 13:1-2

At Nagasaki, the multi-colored cloud assumed at one stage of its evolution the form of a gigantic square totem pole, carved with many grotesque masks that grimaced at the earth and its inhabitants—symbolizing an atavistic throw-back to primitive savagery and barbarism.—*Survey Graphic* 1946

* * *

And I saw one of his [the beast] heads as it were wounded to death; and his deadly wound was healed . . .—*Revelation* 13:3

The mushroom top was even more alive than the pillar. . . . It kept struggling in an elemental fury, like a creature in the act of breaking the bonds that held it down. In a few seconds it had freed itself from its gigantic stem and floated upward with tremendous speed. . . . But no sooner did this happen when another mushroom, smaller in size than the first one, began emerging out of the pillar. It was as though the decapitated monster was growing a new head —*Life* 1945

* * *

And I beheld another beast coming up out of the earth . . .

And he doeth great wonders, so that he maketh fire come down from heaven on the earth in the sight of man —*Revelations* 13:11 and 13:13

Elugelab [an island of the Eniwetok Atoll] died a violent

death in the fall of 1952, the victim of a man-made dragon that breathes terrible fire and smoke—*Los Angeles Times* 1954

* * *

And they worshipped the dragon which gave power unto the beast; and they worshipped the beast, saying, Who is like unto the beast? who is able to make war with him?—*Revelations* 13:4

The very power of the hydrogen bomb is in itself a degree of assurance that no nation will attempt to use it in fear that they themselves might well be destroyed—*Los Angeles Times* 1954

. . . for it is difficult to believe that any people on earth, or any Government responsible to them, would dare to risk such prowess unleashed—*London Daily Mail* 1945

* * *

They will ask thee of the mountains (on that day). Say: My Lord will break them into scattered dust—*Koran* XX:105

The missile, which crashed with the explosive power of 20,000 tons of TNT, covered the entire area of Hiroshima in two minutes with a black cloud which "looked like boiling dust" . . .—*The New York Times* 1945

* * *

And every island fled away . . .—*Revelations* 16:20

The test island of Elugelab—a half-mile long, a quarter-mile wide—blown off the face of the earth. In its place, covered by the placid blue Pacific waters, was a crater one mile across . . .—*Los Angeles Times* 1954

* * *

And woe unto them that are with child, and to them that give suck in those days!—*Matt.* 24:19

There is no escape from the conclusion that atomic bombs already exploded will result in production of defective individuals in generations to come . . .—*Science Digest* 1954

Bugher agreed that atomic radiation, like X-rays, affects

plant and animal genes to produce mutations in the offspring —*Newsweek* 1954

* * *

And when the sky is riven asunder—*Koran* LXXVII:9

We removed our glasses [over Nagasaki] after the first flash but the light still lingered, a bluish-green light that illuminated the entire sky—*Life* 1945

* * *

By the meteors rushing—*Koran* LXXIX:2

Awe-struck, we watched it [mushroom of an atomic bomb] shoot upward like a meteor . . .—*Life* 1945

* * *

By the lone stars floating—*Koran* LXXIX:3

. . . it [the atomic bomb] lit up 180 degrees of the horizon, not like one but a dozen brilliant suns—*Time* 1945

* * *

Then let them which be in Judae'a flee into the mountains—*Matt.* 24:16

Evacuation of millions of people from the Los Angeles area presents a staggering problem . . .—*Los Angeles Times* 1954

* * *

He made darkness his secret place . . .—*Psalms* 18:11

Light 10 times in brilliance the glory of the sun may be your first warning of attack by an atomic bomb. . . . The blinding flash may never clear from your eyes. You may be left groping in darkness . . .—*Science News Letter* 1952

* * *

And saying, Alas, alas that great city, that was clothed in fine linen, and purple, and scarlet, and decked with gold, and precious stones, and pearls!

For in one hour so great riches is come to nought. And every shipmaster, and all the company in ships, and sailors, and as many as trade by sea, stood afar off,

And cried when they saw the smoke of her burning, saying, What *city* is like unto this great city!

And they cast dust on their heads, and cried, weeping and wailing, saying, Alas, alas that great city, wherein were made rich all that had ships in the sea by reason of her costliness! For in one hour is she made desolate—*Revelations* 18:16-19

At exactly 9:15 on the morning of August 6, Japanese time, Hiroshima stood out under the clear blue sky. One-tenth of a millionth of a second later, a time imperceptible by any clock, it had been swallowed up by a cloud of swirling fire as though it had never existed. The best watches made by man still registered 9:15—*Survey Graphic* 1946

* * *

The earth shall quake before them; the heavens shall tremble . . .—*Noel* 2:10

Suddenly over the heart of the city [Hiroshima] a weird light flashed . . . a huge explosion vibrated heaven and earth and it seemed as if the world had been blown to smithereens—*Life* 1952

* * *

This is the Fire which ye were wont to deny. Is this magic, or do ye not see? Endure the heat thereof. . . . Ye are only being paid for what ye used to do—*Koran* LII: 14-16

Simultaneously people stuck their fingers in their ears, closed their eyes and dropped to the ground. . . . The heat was a thousand times stronger than the sun. . . . Steel telephone poles were twisted like taffy. . . . From 10 to 2 in the afternoon the entire city was in flames. The wounded begged for water but there was none—*Life* 1952

* * *

Thou wilt see the guilty on that day linked together in chains, Their raiment of pitch, and the Fire covering their faces—*Koran* XIV:49-50

. . . Radiant heat, first wave to reach ground [Hiroshima], caused clothing on people half a mile away to burst into instant flame, set trees a mile and a half away on fire.

The patterns of dresses Japanese women wore were charred right into their skins—*Life* 1946

* * *

Lo! hell lurketh in ambush—*Koran* LXVIII:21

And the sepulchres are overturned—*Koran* LXXXII:4

And when hell is lighted—*Koran* LXXXI:12

It [Hiroshima] was just like hell—a procession of ghost —the sea of fire . . .—*Time* 1951

* * *

And listen on the day when the crier crieth from a near place—*Koran* L:41

Jun Higashi, a reporter who was with Yamahata [Nagasaki], recalls that he, "stepped on something black in the early light. It moved and I was frightened when it said, 'Save me. Save me.' "—*Life* 1952

* * *

Destruction cometh; and they shall seek peace, and there shall be none—*Ezekiel* 7:25

I believe it is peace in our time—*Neville Chamberlain* 1938

With all my might, as I once cried out for water out of thirst while crawling among the charred bodies on the fateful day, I should now like to cry "peace, peace."—*Life* 1952

* * *

Behold the day of the Lord cometh, cruel both with wrath and fierce anger, to lay the land desolate: and he shall destroy the sinners thereof out of it—*Isaiah* 13:9

In the following waves [of the atomic bomb in Japan] people's bodies were terribly squeezed, then their internal organs ruptured. Then the blast blew the broken bodies at 500 to 1000 miles per hour through the flaming, rubble-filled air. Practically everybody within a radius of 6,500 feet was killed or seriously injured and all buildings crushed or disemboweled—*Life* 1946

. . . Tell us, when shall these things be? and what *shall be* the sign of thy coming, and of the end of the world?—*Matt.* 24:3

This was the nearest thing to Doomsday one could possibly imagine . . . suffusing the earth with a light never before seen under the sun—your world and mine, the world we knew, came to an end—*Survey Graphic* 1946

Mighty—Like a symbol for the end of a world . . .—*Los Angeles Times* 1954

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"There is a principle which is a bar against all information, which is proof against all arguments and which cannot fail to keep man in everlasting ignorance . . . that principle is contempt prior to investigation."

Herbert Spencer

HOMOGENEITY

EINSTEIN, EXPRESSING the status of man's knowledge of himself, said, "Man is thus his own greatest mystery. He does not understand the vast veiled universe into which he has been cast for the reason that he does not understand himself. He comprehends but little of his organic processes and even less of his unique capacity to perceive the world about him, to reason and to dream. Least of all does he understand his noblest and most mysterious faculty: the ability to transcend himself and perceive himself in the act of perception,"[1] and another scientist, Hoyle, says, "Perhaps the most majestic feature of our whole existence is that while our intelligences are powerful enough to penetrate deeply into the evolution of this quite incredible Universe, we still have not the smallest clue to our own fate."[2] Thus, can we see how man, apparently standing on the verge of deep cosmological knowledge, finds himself baffled and lacking in knowledge of his most intimate acquaintance . . . himself. He builds atomics bombs, but because he is so inept at discovering himself he is about to commit race suicide.

To the scientist, therefore, man knows little about himself and seems stymied in his attempts to gain this knowledge, but we might also see how in actuality, man has at his disposal a good deal of knowledge about himself.

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1. Lincoln Barnett, *The Universe and Dr. Einstein,* p. 127.
2. Fred Hoyle, *The Nature of the Universe,* p. 128.

The principal reason of science thinking otherwise is its reluctance to accept as valid anything derived other than from a test tube. Since there is a great amount of such knowledge, then, this attitude of science should certainly puzzle us. How can man possibly understand himself when he shows such contempt for his most priceless and powerful instrument . . . his brain? The answer is that he can not. As long as man allows himself to be plagued by the excesses of the Dark Ages and so lacks confidence in his own ability to fathom the mysteries of his own genius, he will totter along the brink of universal knowledge, grasping the material fundamentals but failing to grow conceptually to the nature behind them.

The scientific process of objective study is not a bad process nor should any attempt be made to discredit or destroy it. Within its field it is a wonderful advance for mankind, allowing him to pick out many points otherwise clouded and giving him a hand of confirmation and guidance along even the less material tangents, but man as a whole must begin to realize the limitations of science. One must learn to master the horse in riding or else the horse will master the rider. With material, it is the same; we must either master material for our own purposes or else it will master us. Today, material is riding us, and though we allow it to master us because it drives us over soft pastures, we are too blind to see that these pastures are also red . . . red with our own blood. We are no longer men, conquerors of the universe, but domesticated animals of materialism, fattening in a trough of self aggrandizement for our eventual slaughter.

At the same time, we possess within us the ability to rise up and conquer the sun itself. Already we have created our own miniature stars in exploding hydrogen bombs and seem to have run the whole gamut of phenomenal tricks, but where do we go from here? We cannot simply continue to amuse ourselves with parlor magic, even if the

parlor is an entire universe and the magic an awesome display. To our minds we must offer more, far more; for as Whittier said in the poem *Ichabod,* "When faith is lost, when honour dies, the man is dead." That is, we are, at least to ourselves, incapable of being satisfied with less than the throne in creation.

To achieve this emancipation from materialism without at the same time denying ourselves the pleasure of being its master, we must not revert to a state of contemptuous anti-materialism but must accept the legitimate and real role of a coexisting noumenal or spiritual universe. In this way, we can proceed to empyrean realms with the broad and unfettered use of both. The past mistake of blindly banishing the conquered master would gain us nothing but another tyrannical master in its stead. The object is not merely to exchange our shackles; it is to throw them off and then to forge them into useful tools. In this, man need fear only himself.

Though the universe appears to be composed of solid objects, there is, as has been shown earlier, no substantiality to anything other than what we choose to give it by our own limiting definitions. This means, that it is logically and scientifically possible to assume the existence of substantial but nonmaterial essences in the universe and gives us the basis for a whole new approach. However, it is not enough to stop there; some formulation of the broad plan of relationship has to be given and then used to develop the detailed parts. For this reason, to timidly allude to possibilities for fear of going beyond the bounds of strict scientific argument and thereby keep to safe waters, is to allow a restrictive attitude, which in itself has been rejected, to dominate. Some boldness must be used in any worth while venture, and though man's present fanatical desire to hang onto what he has, has resulted in a stifling conservatism, the future will be won not by a holding action but by courageous exploration.

If we are going to admit to reality of things beyond the atom, why should we fear to delve into the possibilities and discover where and how they are? It is not particularly new to believe in noumenal existence, since philosophers have pointed logically to it and religious figures have explained it for ages, but what, perhaps, is new, is the ability to reconcile the idea with that of materialism from not only a logical point of view but on the terms of science itself. Now we can not only propose logically the mental dependence upon sensation and the sensually perceived universe, but understand physicalistically how and why it exists. We might say that man has known the general situation for sometime, but is only now maturing to the point of being able to handle the concept with understanding and confidence.

Hoyle's concept of the nature of our universe, at least as to some of the physical aspects, is far closer to the truth than what we have had before, but what happens where he leaves off? As he asks that question, so should we all. It is one thing to propose the spontaneous creation throughout space of matter but another, as Hoyle admits, to answer the riddle of how or where it comes from. Also, it is one thing to propose that matter fades or dissipates at the universe's observable fringe and another to understand what this dissipation or even the concept of the fringe is. Brilliant and close as is Hoyle's new theory, there is still a great deal to be done on it, because in the answers to those unanswered questions above lie many extremely complicated and crucial details, affecting greatly the main premises.

For instance, any man who attempts to paint a picture of the universe must first start with all the pigments. One may believe in a Creator of the universe, but if one does not describe the universe in terms of and in constant cognizance of this Creator with an understanding other than that He is a figment of man's imagination, he can not help but paint a faulty picture. It would seem to be the same

error as trying to explain the operation of an automobile while maintaining the opinion that the engine is no more than a philosophical invention of the driver's mind. Especially in such deep questions as the nature of the universe or the mysteries of man, the Creator must not only be understood to exist, He must be given a prominent place in considerations of even scientific jurisdiction, as very difficult as such undoubtedly is.

This means that in man's present state of development, the time has come for him to understand and reconcile the nonmaterial, yes, but also that this understanding and reconciliation are necessary to his furthered enlightenment and advance in both the social and the scientific fields. It means that in order to proceed much farther in understanding the deeper secrets of the universe, he must develop a full recognition of and respect for the essential sameness and oneness of the material and the noumenal universe. To accept the two but maintain a mental separation cannot be correct except for the temporary or instantaneous inspection of a particular point under study, since the two are, in fact, one, inseparable, and dependent. That is, the universe must be considered as ultimately a homogeneous complex of apparently dissimilar entities.

The theory proposed by Democritus and Leucippus two thousand three hundred years ago is, then, in essence still valid. The fault of our criticisms lies more with modern man than with the ancients for our having stopped too soon in giving the name atom to a divisible entity. Therefore, the theory is more valid than we generally suppose. Whatever incorrectness may exist about it, at least as we see it today, is in the concept that this indivisible entity must necessarily be materially substantial. If we are to properly understand the true situation and thereby reject the narrow Newtonian concept of materialism, it is not impossible, then, to understand how the universe is, ultimately, composed from an uncreated essence. This, in turn, opens to our mind

a farther channel whereby we can begin to overcome our naturally inherited terrestrial or Newtonian frame of mind.

That is, we can understand through a better conception of what is meant by creation, the broader picture opened to us physically by the Michelson-Morley experiment and delved into by the Theory of Relativity. We can begin to comprehend the material state and its sensual relationship to our minds as discussed by such as Locke, Berkeley, Hume, and Kant, and we can, perhaps, understand the reasons for the discoveries presented by the Theory of Relativity itself.

To us, creation may have varying meanings, but the closer definition to what is generally conceived today makes it almost synonymous with material formation. If creation is thus conceived, we may say that creation consists of all materially constituted entities and that all nonmaterial things are uncreated or unsubstantial in nature. From this, we see that any created thing cannot be in a static state but must necessarily be moving from the uncreated state to the created state to the uncreated state again. Specifically, then, anything created or integrated materially must of necessity, revert to an uncreated state, or in other words, disintegrate. However, the uncreated essence has a timeless character, discussed at more length in a later chapter, which makes a concept of beginning or end meaningless to it, since it, by its very nature, can have no beginning or end. It can only be used to form a created thing and thereby be associated with impermanence, not have any impermanence of its own. Impermanence and substantiality are therefore apparent characteristics while the essential characteristics, cosmologically speaking, are permanence and intangibility. Where the homogeneity of the uncreated essence seems to be incapable by definition of complexity, it is, by virtue of its simplicity, capable of unlimited complexity, for complexity is a relative term meaningful only in the phenomenal sphere of things. Our present state of

mind imagines these limitations due to its own limited state of development.

Now in simpler and more specific terms, everything in existence, the table, the chair, the air we breathe, and we ourselves are formed or created from an uncreated essence which cannot be sensually perceived in its ultimate form. However, when directed into forming a created thing, it develops an affinity for other created things due to the impression of a Will; and in fact, its formation is the Will itself. This affinity, in turn, is the basic universal law known to us as Love. It is the law binding the atoms and celestial bodies together as well as human individuals, though some tend to disregard it because of its human association.

To illustrate these concepts of the uncreated essence and the entire nonmaterial sphere of being (the noumenal universe), certain points are worth now bringing out on the specific example of Love, along with certain related things. For instance, Love is a cosmic law of nature which is as real as the law of gravity and just as capable of being expressed in the form of mathematical equations, but these equations are of such a complexity that the human mind may never be able to discover them. They may even involve forms of mathematics not yet developed. Yet, this does not take the personal element out of Love as felt by human beings, because though it is a cosmic law, there is no reason to assume that man is at any time divorced from cosmic law.

And too, though there are apparent inconsistencies in application of it and a whimsicality about it, its exactitude as a law is not subject to caprices. In the same way, the criticisms of religion as being apparently inconsistent, erratic, and even chaotic, especially in its popular presentation by some ecclesiastics, are contrary to the true situation. For instance, it is said that religion as a personal feeling or as introduced by the great Prophets (with its emotional element)

is a product of man's desires to gain security through being able to explain away that which he is unsure of or of his desire to control his fellow being by its overwhelming power. It leads some to observe, as did Einstein, "I cannot believe that God plays dice with the world."[1] The tendency is to look into the order of the universe and into nature, turn back and look at the disorder and discord of the human world and arrive at the conclusion that what appears to be in harmony and following certain well organized patterns is real, natural, and true and that what appears to be discordant or to be inconsistent is the product of man's imagination. Perhaps in one sense this may be true and logical, but in another sense it is also false. We might, for instance, be tempted upon casual observation of outer space to see very little consistency, yet this does not mean there is any lack of smoothly functioning universal laws. Also, we must remember that in spite of whatever disrespect we may have for the human element in man, man *is* a part of the universe, Love *is* a part of the universe, and thought *is* a part of the universe whether we like it or not. If this were not so, if these were not part of the natural order of things, we would not be, we would not love, and we would not think. The mere fact we feel love is proof enough of its existence.

Inconsistency or chaotic appearance, moreover, does not prove or even indicate that what is being observed is not following exact laws of nature, and an excellent analogy can be seen just outside of anyone's window. As Einstein pointed out, "To be sure, when the number of factors coming into play in a phenomenological complex is too large scientific method in most cases fails us. One need only think of the weather, in which case prediction even for a few days ahead is impossible. Nevertheless no one doubts that we are confronted with a causal connection whose causal components are in the main known to us. Occurrences in this

1. Lincoln Barnett, *The Universe and Dr. Einstein,* p. 39.

domain are beyond the reach of exact prediction because of the variety of factors in operation, not because of any lack of order in nature."[1] Thus we can see how such a complex law as Love must be, not only could but probably would appear to be chaotic, unpredictable, and erratic.

Next, and very important it is, is the question of how we are to arrive at conclusions concerning nonmaterial things such as Love if we cannot rely on objective scientific tests. To answer this, one could simply say, "by subjective means," but this is not enough, since the term is so broad. Therefore several of these subjective means should be considered.

First, there is the one known of an intuitive knowledge, or that knowledge gained without the aid of logic and coming intuitively from some known or unknown external source. It might be called an extrasensory perception of an undiscovered thing or thought. However, it is something which is a fact and has been in operation since man began to think. Such men as Plato and Aristotle, for instance, were undoubtedly influenced by it, for logic alone does not suffice to produce some ideas. In other fields, it is the thing which helps inventors and scientists discover nature's secrets, and few have not been influenced by it even though they may not have been conscious of this influence. How otherwise did Kekulé discover the benzene ring (the structural formation of the benzene molecule) except through a dream? How otherwise did Jules Verne describe accurately so many future contrivances such as the submarine and the electric light? How otherwise did Lord Tennyson predict great airplane battles, bombing raids, and the United Nations when he wrote,

"For I dipt into the future, far as human eye could see,
Saw the Vision of the world, and all the wonder that would be;

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1. Albert Einstein, *Out of My Later Years*, p. 31.

Saw the heavens fill with commerce, argosies of magic sails,
Pilots of the purple twilight, dropping down with costly bales,
Heard the heavens fill with shouting, and there rained a ghastly dew
From the nations' airy navies grappling in the central blue;
Far along the world wide whisper of the south-wind rushing warm,
With the standards of the peoples plunging thro' the thunder storm;
Till the war-drum throbb'd no longer, and the battle flags were furl'd
In the Parliament of man, the Federation of the world.
There the common sense of most shall hold a fretful realm in awe,
And the kindly earth shall slumber, lapt in universal law."?

Why else did Einstein say, "The most beautiful and most profound emotion we can experience is the sensation of the mystical. It is the sower of all true science. He to whom this emotion is a stranger, who can no longer wonder and stand rapt in awe, is as good as dead. To know that what is impenetrable to us really exists, manifesting itself as the highest wisdom and the most radiant beauty which our dull faculties can comprehend only in their most primitive forms—this knowledge, this feeling is at the center of true religiousness."[1] and, "The Cosmic religious experience is the strongest and noblest mainspring of scientific research."?[2] What led Hoyle to decide on a dynamic, expanding universe and give as one irrational reason, "There

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1. Lincoln Barnett, *The Universe and Dr. Einstein,* p. 117.
2. *Ibid.,* p. 117.

are some people who seem to think that it would be a good idea if it was static. I disagree with the idea, if only because a static universe would be very dull."[1] That is, is it intuitively dull to him, because he sensed imperceptibly that it is not, in fact, static?

Dr. G. A. Shook, a physicist, wrote in his *Mysticism Science and Revelation,* "Broadly speaking, then, there is a kind of intuitive knowledge (as opposed to discursive knowledge), which comes to us through an inexplicable, unselfconscious process of thought. Science does not deny this kind of knowledge."[2] It is this type of knowledge which gave the atomists of ancient Greece, Leucippus and Democritus, their concept of everything being eventually broken down into one indivisible element called the atom, and though some say such a theory was pure guess work, such is unlikely if on no other basis than it is too imaginative to have been picked out of a hat and too contrary to the obvious facts at hand. At any rate, it remains a matter of record that in this particular instance a theory was developed which turned out to possess an amazingly high degree of accuracy and which was developed at a time when there was no physically possible way for it to have been developed other than to have come from an external, intuitive means.

In another exemplary instance, a quote from an ancient Persian mystic poem, may amaze us with,

"Split the atom's heart, and lo!
Within it thou wilt find a sun."[3]

Certainly this brilliant gem of precognition or intuitive insight, quoted in 1863 as being old then and describing accurately the source of the sun's (or any star's) power as nuclear, cannot be rationalized as being a stab in the dark. Can we say with absolutely sure and logical conviction that

1. Fred Hoyle, *The Nature of the Universe,* p. 103.
2. G. A. Shook, *Mysticism, Science and Revelation,* p. 5.
3. Bahá'u'lláh, *The Seven Valleys,* p. 12.

the authors of this quote and the ones on page 58 did not have a precognitive knowledge of nuclear fission? How then can we deny the validity of intuitive knowledge and noumenal reality?

Second of the two more important subjective means of learning about the noumenal sphere is through the special religious element known as direct revelation. This is in some ways similar to the subject of precognition, but its special religious bearings not only give it basic differences, but make it a particularly difficult thing to approach from an open minded point of view. That is, so much natural animosity to religion has been built up in the minds of many thinking men, by the excesses, hypocrisy, and narrow mindedness of some ecclesiastical authorities and by the narrow minded opposition of pseudo-scientists, that to even discuss religion among some groups can be difficult. Among others it is impossible.

Einstein, in expressing his opinion of the relationship between science and religion, said, "If one conceives of religion and science according to these definitions then a conflict between them appears impossible. For science can only ascertain what *is*, but not what *should* be, and outside of its domain value judgments of all kinds remain necessary. Religion, on the other hand, deals only with evaluations of human thought and action: it cannot justifiably speak of facts and relationships between facts."[1] How, then, can religion, as has just now been proposed, discover the noumenal secrets of the universe if it is rightfully limited to determining what should be rather than what is, or, if religion does determine what is as well as what should be, then does it not open a possibility of conflict between the two?

The answer, of course, lies in what appears to be a paradox, for, as so often is the case, two sides of an argu-

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1. Albert Einstein, *Out of My Later Years,* p. 29.

ment are both right and wrong, and the paradox becomes a product of the lack of scope in knowledge and a semantic enigma. Religion, for instance, can mean to some the church of a religious belief as formalized by ecclesiastics, or it can mean to others the spirit of the movement originally generating the church. Also, lack of knowledge about the physical manifestation of real and significant noumenal powers cannot fail to have its definite impression upon the conclusions drawn about relationships concerning science and religion. This means that a new and more correct understanding of what comes under the scope of natural occurrence and a realization that religion is not a fact responsible to the vicissitudes of ecclesiastical authority, will give us a different approach to the relationship between science and religion and help us to form a more intellectually tenable solution.

It is true that there should be no disagreement between religion and science, but the reason is not because of a difference in function. Such an explanation seems to be more of a diplomatic compromise, defining boundaries of noninterference, than a line of pure analytical thought, because both religion and ecclesiastical authority claim more than a knowledge of what should be. As an example, the first book of the bible, Genesis, pretends at least, to describe the creation of the universe, not from the standpoint of what should be but from that of what actually took place, and the most disconcerting part of it to those who would oppose the factual determinative of religion is the realization that Genesis describes allegorically a fairly accurate picture.

The reason why there should be no disagreement between religion and science is rather that their function is the same. That is, if both are means for searching the truth, there can be no valid arguments between them since the truth is one. If an argument arises, then, it is that one of the two or both have not found the truth they claim to

have found. The scientist may prefer to think that religion is necessarily wrong in such an argument and the religiously based man may prefer to believe that science is invariably the wrong party, but the truth is neither of these alternatives. Both the religious search for truth and the scientific are subject to error. Religious fanaticism or blind scientific assumption are not substitutes for rational logic and rational logic is not a substitute for truth. The truth can very easily turn out to be contrary to common sense, as it did in the case of the behavior of light. The whole accepted scientific foundation of physics was shaken with the Michelson-Morley experiment.

The real difference, however, between religion and science is in the means with which they search the truth, and here lies a problem, Though everyone is probably familiar with and accepts as valid the objective means of science, the religious subjective means known as revelation is both little understood and seldom accepted for what it is. The rationalist, who is rational only in his disrespect for irrational religious fanaticism, cannot bring himself to consider that revelation may, in truth, be a natural fact. He is so opposed to the kind of argument, the subject of the argument is attacked blindly. It is guilt by association. Once the mind is allowed to study the question freely, the logical acceptance of revelation is not difficult at all. It is, perhaps, only important to bear in mind Albert Schweitzer's caution, "The city of truth cannot be built on the swampy ground of skepticism."[1]

Though there is an essential difference between normal precognition and revelation, the two are often confused because of the apparent similarities and the practically invariable dual presence of both. From a historical point of view, it is sometimes difficult to separate the real from the legend in known examples of revelation, but it is not right, as has

1. Albert Schweitzer, *Out of My Life and Thought*, p. 223.

been done far too many times, to attribute any or even most of the reported unusual powers to legend rather than fact. To reject an account because it seems to be absurd is certainly not scientific. If it were, the Michelson-Morley experiment would have been rejected. Also, to reject an account because its reporters were emotionally impressed, because it seems to be physically unexplainable, or because no recent example has occurred, is not logical. How many scientists are not emotionally impressed by unusual phenomena, such as the atomic bomb? Who can give a physical explanation other than theory for the aurora borealis or explain physically Emanuel Swedenborg's description of a fire taking place hundreds of miles away? Who had seen an atomic bomb prior to 1945? No, to be truly scientific, one must be ready to study objectively any phenomena, absurd or not, without the slightest prejudice. In this respect, modern man's rejection of the nonphysical is, as has been said before, much closer to the attitude which attacked Galileo than to the concept of science.

Revelation is a very rare natural occurrence in which a human being is involuntarily placed in the position of receiving cosmological (meaning in this case, pertaining to the order of all natural things) knowledge of a high, sensually imperceptible order. Where it involves the specific and direct communication to the individual of laws or knowledge by the Cosmic Intelligence (God) to be applied by human society, it should be designated separately as divine revelation. This is important, because the force of the Will of the Cosmic intelligence requires that the information or laws so given in divine revelation shall be infallible, whereas the information revealed otherwise is subject to the interpretation and disposition of the receiver. The intent of the divine revelation as a guide to human society is the reason for its necessarily being infallible. Were the revelation fallible, the intent would obviously be defeated. In other cases, where the intent is not present, the revelation is

infallible only to the application intended, such as the solving of an individual problem. Then too, the question of infallibility in revelation has a somewhat special meaning.

A thing may be infallibly correct at an instant and not at another instant, since the laws generally given apply to a thing (man) with changing capacities and requirements. This does not mean to imply that there is no law of continuous or universal application, but it does make such a law indiscernible to man, since man cannot embrace a timeless or universal scope entirely in making judgments nor can he be aware of all the factors involved. He is limited by his state. Therefore, a divine revelation is completely infallible (and the only infallible source of knowledge) only at the instant of its ordination. But, as to what elements may become obsolete from time to time or become infallible again, only the original Source (God) can determine. In this respect man should, but seldom does, realize his impotence. It means, in effect, that since no temporal or ecclesiastical authority possesses the ability to judge infallibly, all divine (and only divine) revelation must be considered to be infallible and binding until altered by the original Source Itself. The only possible exception (and it would be an apparent exception only) would be where the revelation itself provided unambiguously and specifically for a system of divinely authorized interpretation. Other than this, exceptions are manufactured for convenience.

The only remaining important thing on the subject of revelation, now, (divine revelation especially) is the question of how one can logically determine what constitutes a genuine example. First, going back to the question of proof, we should remember that even proof is relative. We cannot take any one incident, observation, or experiment as proof unless we are uncommonly easy to please. Therefore, since no absolute proof can be obtained for anything, physical or spiritual, the principal way of achieving a basis for determining the genuineness of revelation, is, as with all things,

by the study of many points; for, where a small point may fail to convince a particular individual of proof in any given analysis, the accumulative impact of a mass of such small points sometimes furnishes us with, at least, a conviction of proof. Second, if we are fortunate enough to experience the action of intuitive knowledge, we will need no other proof. It will be scoffed at by the inveterate materialistic critic as being merely based on faith, but such should be of little consequence since the scoffer, himself, bases his whole foundation on faith too.

The mass of small points serving to convince us should rightfully come from a study of the lives and fortunes of such as Jesus of Nazareth. Few people, for instance, will deny the genius of Jesus and His tremendously inspirational life. Though one may not attribute any unusual powers to Him other than an abundance of intelligence, few discerning individuals will not admit His greatness.

Genghis Khan conquered practically the entire known world. Harold Lamb said of him, "Indeed it is difficult to measure him by ordinary standards. When he marched his horde, it was over degrees of latitude and longitude instead of miles; cities in his path were often obliterated and rivers diverted from their courses; deserts were peopled with the fleeing and dying, and when he had passed, wolves and ravens often were the sole living things in once populous lands."[1] Known as the Mighty Manslayer, the Scourge of God, the Perfect Warrior, and the Master of Thrones and Crowns, he is little remembered today. Probably not one reader in ten can name within half a millennium the date of his reign, the land of his origin, or the race of men he came from.

Yet Jesus, Who was born, lived, and died within a radius of a few miles, Who lived only three years after achieving even a local fame, Who was killed like a thief, Who had

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1. Harold Lamb, *Genghis Khan, Emperor of All Men,* p. 1.

only a handful or two of loyal friends, Who was opposed both by His own people and the most powerful state in the world, Who was born and died a carpenter, Whose name sank into relative obscurity for three hundred years after His death, is now one of the most known figures ever to have been upon the earth. He has the loyal devotion of over eight hundred million people, almost two thousand years after His obscure death, and His influence has created nations and empires, founded a civilization, and strode the earth far more than Genghis Khan ever dreamed of doing. The same or as much can be said for Muhammad or Buddha or Zoroaster. If this is not powerful evidence, historical and real, what is?

Another important point is that this same genius, Jesus, never claimed to be a philosopher or a scientist but distinctly and unquestionably claimed to have unusual powers and to be ordained to reveal information given to Him by the Creator. How presumptuous and contradictory it seems for men today to state in one breath their realization of the unparalleled genius of such a figure and then in the next breath to assume a superior air by rejecting His basic claim. If Jesus was such a genius, who now claims to be of stature enough to say He was wrong?

It is difficult to see how Jesus could be anything other than what He claimed to be unless He was a liar, a hypocrite, demented, and/or avaricious, none of which could logically be upheld. In the first place, His whole life and being was pitted against the hypocritical and avaricious. Obviously, He believed in His station Himself, though not necessarily as others would put it, for He had nothing to gain personally and everything to lose by His actions. He made no attempt to exploit the cry that He was the King of the Jews and He refused to do what was necessary to save His life. To attribute selfish motives of desiring a martyr's death for what psychological satisfaction it might give Him (as some would do) is not in keeping with His prayers

for being spared or His highly mature and well adjusted view point. It is true that He was abnormal if we mean by that, "deviating from the normal condition," but His abnormality was because of His superiority from the norm, not because of weakness. He was obviously inspired by standards higher than what He could have inherited and believed in His authority to judge the malice of His fellow Jews. If one is to reject His claims, it must, it would seem, be based on a rationalization that perhaps He never existed and so attribute to the supposed fabricators His genius, His purity, and the inconsistent quality of being false enough to produce, at the same time, a monstrous lie. Besides, the subtle points (such as His praying to be spared execution) which are too natural to have been fabricated, especially since they sometimes tend to produce an opposite effect than the desired respect for divinity, the proposition of His life being a hoax is completely incongruous and not in keeping with the general historical accuracy of the rest of the bible. Such a thing is possible, of course, though unlikely and is impossible to disprove. It is also impossible to prove that Shakespeare was not actually Francis Bacon under another name, but still it is far from likely.

The natural occurrence of divine revelation may seem like an imaginary process, not in keeping with the general pattern of nature, but a consideration of the process from an unbiased point of view shows it to be logical and congruent. To some it seems peculiar that man should need to receive any special messages from an outside Source to guide his social order and still even more peculiar because it cames through what seems to be a nonphysical, unexplainable process. However, few will deny that man receives needed heat and light from an outside source such as the sun and that no one can explain satisfactorily how this beneficial and vital energy of heat and light is transmitted physically through a nonphysical vacuum. That is, logically speaking, what is anymore unnatural about man

receiving guidance through revelation than receiving heat and light through a vacuum? Must we assume, to appear logical, that nothing can be a natural occurrence which involves human-like things, that mankind and his functions are somehow inexplicably set apart or withdrawn from nature? One may theorize about the transmission of light and, as Lincoln Barnett says, "we can, if we choose, imagine ourselves living in a universe of waves, a universe of particles, or as one facetious scientist has phrased it, a universe of 'waveicles.' ";[1] but, to suggest the no less reasonable proposition that man receives an informational force through a purposefully directed but physically unexplainable channel, brands one by some otherwise logical people as an illogical, religious fanatic. The sun *is* a source of energy, the transmission *is,* in physical terms, unexplainable, and man *is* dependent upon it; similarly, man's society is dependent upon an informational energy, transmitted in a physically inexplicable manner from some Source. The only difference lies, perhaps, in that the sun can be seen visually and the Source cannot. If men were blinded suddenly, even that difference would disappear.

In short, conviction should come from a study of the great religious teachers. So outstanding were Their lives and so consistent were Their basic claims about the noumenal sphere that a respect for Their genius should call for a vote of confidence in Their most cherished and dynamic claim. Their words, Their deeds, Their results, Their influence, Their uncanny grasp of knowledge without education, Their consistency, Their mutual support, Their own belief, Their confident assumption of authority, Their unselfish service, Their very great genius, Their ability to use unknown laws of nature to create miracles, and Their devotion and conviction to the point of death, torture, humiliation, failure, imprisonment, and poverty, are all

1. Lincoln Barnett, *The Universe and Dr. Einstein,* p. 33.

points helping to convince one of the validity of divine revelation. In other words:

> "How can I claim to have known Thee, when the entire creation is bewildered by Thy mystery, and how can I confess not to have known Thee, when, lo, the whole universe proclaimeth Thy Presence and testifieth to Thy truth?"[1]

1. Bahá'u'lláh, *Gleanings from the Writings of Bahá'u'lláh,* p. 63.

"I had rather believe all the fables in the Legend; and the Talmud and the Alcoran, than that this universal frame is without a mind. . . . For while the mind of man looketh upon second causes scattered, it may sometimes rest in them and go no further; but when it beholdeth the chain of them, confederate and linked together, it must needs fly to Providence and Deity."[1]

Francis Bacon

1. Will Durant, *The Story of Philosophy,* pp. 114-115.

GOD

By far the most difficult subject to broach with any chance of success is that of describing or defining what is meant by God. Some would, in fact, prefer to maintain their aloofness and materialistic integrity by refusing to discuss any subject (such as this) which is indefinable; however, these same persons evidently do not realize that there is no such thing as an absolute definition in their own champion . . . science. Everything, regardless of its substantiality, must be defined in terms of other things, relationships or ideas. Indeed, things would be quite simplified if we could find some one thing, absolute and changeless, which we could see as an anchor point for forming definitions of everything else. Some start, like Descartes, with, "I think, therefore I am," others with a sense that somehow or other there is an absoluteness to material concreteness, and still others with the thought that everything hinges around the indefinable concept of God.

From a modern stand point, however, regardless of how one starts, the problem is complicated by the bias created in learning by the popular misunderstanding of the function and process of science. As Einstein said, "Then came the growth of the natural sciences, with their great influence on thought and practical life, weakening still more in modern times the religious sentiment of the people. The causal and objective mode of thinking—though not necessarily in contradiction with the religious sphere—leaves in most

people little room for a deepening religious sense."[1] That is to say, though this weakening process stems from the influence of science, it is not rightfully the result of true scientific process but is an illegitimate offshoot. With a realization of this, perhaps, the people so weakened can now resume confidence in the possible truth of religious investigation without releasing one iota's worth of their confidence in the scientific process. If so, the approach to an understanding of what is meant by God, shorn of both its negative biasness and its phobia against anything indefinable (such as an electrical charge or God), will become much easier. After all, why strew the path you must walk with useless thorns?

In approaching this difficult subject of God, then, perhaps the best way is by starting with something familiar such as ourselves. If we look back in history, and especially if we read religious historical literature, we will find that man has always been a dependent creature. As much as we might like to believe otherwise, man is and has always been limited by some psychological need for relating himself to his environment; and today we have, through the aid of science, been able to realize to what a great extent and how thoroughly basic a thing this dependence is.

Once thought to be the result of purely psychological factors or the lack of knowledge, it is now known to be both psychological and physiological and has become a particularly important factor in preparations now being made to enter into the age of space travel. At a symposium on space medicine held at the University of Illinois in March of 1950, including several men from the U.S. Airforce Department of Space Medicine at Randolph Field, Texas, Col. Paul A. Campbell said, "according to most experimental and clinical evidence, absence of the visual function and of either

1. Albert Einstein, *Out of My Later Years,* p. 23.

of the other two functions [vestibular and kinesthetic apparatus: author] will lead quickly to disorientation, confusion, and giddiness. The Romberg test offers clinical evidence of this phenomena. The disastrous consequences of blind flight through clouds, precipitation, or darkness during the pioneering days of aviation, before the development of substitute orientation instruments, offers much practical testimony."[1] That is, during the early days of air travel, pilots sometimes had a difficult time maintaining their mental balance when their planes entered into a cloud bank or otherwise became visually disoriented. Until the simple device of a glass curved tube (with a little ball which would roll to the bottom of the curve when the plane was righted) was placed in the plane, a pilot might have difficulty knowing whether or not he was right side up. Though the thought might seem ridiculous, the disastrous results were not.

Later, with the advent of space travel looming on the horizon and its manifold special problems rising to perplex researchers, the old but only recently recognized problem of orientation took on a new degree of importance. In the words of Col. Campbell again, "Both objective and subjective orientation are required for the purposeful, unconfused activity necessary for at least a part of the tasks which an astronaut [spaceman: author] would be required to perform."[2] To visualize this, one might recall the recently published accounts of Air Force experiments in which a plane dove to simulate the gravity free environment of a space borne man. It was shown how the men involved in the experimental fall had trouble in thinking sufficiently to work simple arithmetic problems such as two and two are four, bearing out Col. Campbell's statements. This illustrates how

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1. John P. Marbarger, *Space Medicine,* p. 64.
2. *Ibid.,* p. 63.

important the problem can be and how what might also be considered a philosophical problem can have very physical significance.

Man's mind appears to be incapable of maintaining its conceptual balance unless related to some point of reference, but its effect is not limited to the severe case of spacemen, where all three orientation means may be absent at once. It is something noticeable to some extent or another in everyday life. For instance, when one comes out of a theater, he may become temporarily befuddled and slightly panicky with the subconscious effects of his world suddenly narrowing to include only his unfamiliar visible surroundings. His mind, captured by the fancies of the motion picture, has not maintained its immediate relationships in reality, and a few seconds of mental impotence elapse while it reorients itself.

When the same thing occurs more slowly and with warning (as on entering a new city or country), the problems are much less noticeable, because the individual has had time to relate himself to some other common point of reference, but even when the situation occurs suddenly, the effects are minimized by the many natural points of orientation such as a sense of belonging terrestrially.

A man, on waving good-bye to his family from a train window, watches them slowly disappear from view, and though memory maintains his relationship to them for awhile, even this begins to fade in reality, leaving his mind to reorient itself to other things. The buildings flashing by, being familiar objects, are next taken as the point of reference and lend security to our recently embarked traveler. Then, as the train passes into the increasingly unfamiliar countryside with its green farm lands and isolated farm houses, the man again subtly readjusts his orientation by switching his sense of belonging or being from the familiarity of the urban social scheme to the broader scale of the state, all of which ties his mind back to his family. Slowly

the train creeps slowly Westward, leaving even this new orientation, until all that is seen is a desolate, barren plain, devoid of anything but the stark sight of an alien nature. His mind, robbed of the sight of even a rural society is forced to adjust again by extending the chain of connection to include the general affinity of the earth itself, of materialism as a whole, or, more often than not, of something universal.

Still, he is able to rest secure in this subconscious relationship, as he watches the beauty of his new world muralizing by, but when night falls on the desert, the world that was to him a huge hemisphere of visual reference all the way to the mountainous horizon, becomes an aluminum tube rocketing through a black stretch of nothing. Here his mind begins to relate itself more closely with that of his fellow passengers, bringing about the well known "society of passengers" in which strangers become close friends in a matter of minutes, driven by the unrealized need for orientation or security to a temporary state of unusual intimacy and confidence.

Subtly but powerfully, this ever present, all pervading need drives us on. We deny it or minimize it as long as it is filled enough to remain in the background, but sooner or later it will manage to grip us tightly.

As George Meredith wrote,

> "Cold as a mountain in its star-pitched tent,
> Stood high Philosophy, less friend than foe:
> Whom self-caged Passion, from its prison-bars,
> Is always watching with a wondering hate.
> Not till the fire is dying in the grate,
> Look we for any kinship with the stars."[1]

Historically speaking, man's orientation has shown the same growth as the rest of his natural maturing process. In the beginning he oriented himself to a mountain, say, using

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1. Oscar Williams, *The Golden Treasury,* p. 335.

it as a visible point of reference so that he might not stray too far in hunting. It might even be named symbolically as the home of his gods, an Olympus or Ararat. Then, as he bravely extended himself by cautiously dipping his navigational toe into the chilly waters of an apparently endless sea, he shifted his orientation or base of security to the land mass as a whole, and this became the flat earth of Columbus' day. It held for a time with little need for a change, but the natural expansion of man's physical growth and his insatiable curiosity began to push beyond his own psychologically established limits.

In a struggle of historic importance Christopher Columbus fought to prove to the masses the idea that the world was not flat and to the educated few that the round world could be circumnavigated. We today like to wonder at how people could be so obstinate about refusing to accept what was obviously the truth, and we probably think we would not have been so blind . . . but only because we too are blind in the same way.

Long ago Jesus said, concerning this facet of human nature, "Woe unto you, scribes and Pharisees, hypocrites! because ye build the tombs of the prophets, and garnish the sepulchres of the righteous. And say, If we had been in the days of our fathers, we would not have been partakers with them in the blood of the prophets. Wherefore ye be witnesses unto yourselves, that ye are the children of them which killed the prophets." (Matthew 23:29-31) Similarly we who condemn the people of Columbus's day might reflect that we are but the children of those same blinded souls. The switching of the orientation point to a round world was not obvious, but rather, was an extremely complex thing for the people then to accept. It meant risking their whole basis of security, of reorienting themselves from the ground up. Today we are born with the concept of a round world pervading our lives, yet few of us have probably thought to imagine exactly what it all implies and

how puzzling it is to conceive. To many of us, it is still a flat world, with an up and a down and its rotundity being something definite but unconceived. In Columbus' time, the people had to go much farther with much less.

Then, with the round earth taking its newly won place as the center of our universe, the growth of knowledge again began to force a change. Naturally, again, the people fought back desperately to protect their security. Today we tend to place the blame of Galileo's persecution on a few ecclesiastics, but in all fairness we should realize that they were merely acting on behalf of the people. It may be true that being the leaders, these ecclesiastics must bear the responsibility for what happened, but still it is not correct or fair to ignore the natural inertia of the people themselves. That is, Galileo represented, in reality, the minority opinion. The people could not face to the seeming destruction of their point of security, and whether we like it or not, the obvious truth was that the earth was the center of the universe, the actual truth being far from obvious to all but a few. We must try to think of it in terms of the people then, not with what we know now, because we cannot count our knowledge today as a comparative virtue; it was the gift of those who fought the struggle hundreds of years ago.

Later, man again shifted his ever broadening, ever more cosmic orientation from the sun as the center of our universe to a point from which the expanding universe is supposed to have originated. It was a peculiar thing to be proposed since it implied a sort of Newtonian-like direction complex in an otherwise wholly relative universe, and the fact that the earth seemed to be strangely near the center did little to arouse suspicion. Also, it was linked up with estimates that the universe originated some two billion years ago, but geologists uncovered rocks older than this supposed creation and the epochal origin was re-estimated and increased conveniently by only some one hundred per cent. However, the theory persisted and became the one

most commonly accepted. Then, abstract and uncertain as had this point become, man's orientation preferred in practice to take on the form of materialism, or security in relating to material substantiality itself. It was, after all, easier to grasp, and it certainly was productive.

Piece by piece, point by point, man had been able to shift his orientation to ever larger entities, groping blindly up the frighteningly dark stairs of his unknown surroundings while at the same time keeping one of his hands gripped tightly on the banister of the friendly known. His growth had been slow but steady in its progressive climb until today he appears to be faced with panic, since the destruction of materialism amounts to a removal of the banister. The necessary reorientation had become more than merely shifting from one object to another. His mind was going to have to take on a whole new concept.

One of the greatest problems facing man in the past and today is the one regarding the concept of reality and existence. Does a thing exist apart from the mind? Is everything a product of our individual imagination? And, what is the relationship between matter, senses, and mind? Hume saw nothing as known to us except through our senses (as have many others), and Kant saw that aside from any independent existence an object might have, it had a conceptual existence, colored by the peculiarities of our individual or collective thought. That is, we can know nothing except through our senses, and what we do perceive depends on the functioning of these same senses.

Descartes, on the other hand, based his arguments on the premise, "I think, therefore I am," which served to show that regardless of anything else, a man *is* to himself; and of course, since discovery and knowledge are meaningless to objective reality, the truth of the statement should be apparent. That is, we can see that reality is a state of acceptance in the mind. A thing has no reality unless perceived in the mind, because its reality is the product of

perception. Whether a thing is real or not has no meaning outside of its perceptive influence on the mind.

At the same time, this line of argument reveals another apparent truth which seems to be in contradiction. That is, if a thing is not real unless perceived, it has generally seemed logical to follow with the conclusion that it does not exist when unperceived, the trouble being that though many have wanted to accept it, such a proposition strikes one immediately as being false. It is true that the truth very often seems unreasonable, and the arguments leading up to these conclusions of nonexistence unless perceived are very logical, but this particular conclusion does not seem in keeping with the rest of the argument. It appears to border on false logic.

We know, for instance, that objective reality maintains a flow of continuity regardless of our perception. That is, though we may not perceive members of our family, they apparently pursue independent courses while not with us. Also, clocks continue to tick and rivers to flow . . . all without us, and though some would claim this as a product of our imagination, this continuity itself, it is too complex a thing with too many manifold and far reaching effects (such as extra-terrestrial movements) to be a logical solution, however possible it might be. Our being bids us to recognize the fact of independent continuity and use it to form some new plan reconciling the apparent contradiction.

That is to say, we know that a thing is not real unless perceived but does exist without being perceived, since its independent continuity requires this, but we also know that an existing but unreal object has no meaning due to the fact that real and existing bring the identical thought to mind. In this, it seems to imply that a thing is real when it is unreal, that it exists but does not exist at the same time. The solution, consequently, must somehow bring all these contradictions into harmony without disturbing the fact of independent continuity.

Impossible as such a thing may seem to our present state of mind, however, there is a solution fitting these exacting requirements. That is, if a thing has reality only in relationship to a perceiver and if a thing exists or has reality when not perceived by the mind of man, it necessarily follows that it has reality or existence in relationship to some other, outside Mind . . . the Mind of the Creator. Objective continuity, therefore, is direct evidence of a Cosmic Intelligence. It shows us how this single, absolute Point (God) keeps everything conceivable to man in dependent relativity.

Now, if we understand this and accept it as a valid solution in spite of what we might desire otherwise, we can understand more clearly the many small points about specific reality problems. For the perception making an object real is not limited to sensual perception but includes perception by the inner or sixth senses. Certainly it seems very arbitrary of us to set up a limit to the number of our senses or to say that what senses we have can necessarily embrace all that is. Therefore, if we do have unrecognized senses, they must make real to us unrecognized things, since a thing becomes real through being perceived and the perception is of otherwise unreal things. That is, we usually do not consider spirits as real, but if we, for sake of argument, were able to touch and see a ghost, we would say it is real . . . indeed, it would be real.

Take as an example Kekulé's description of how he discovered the structure of the benzene molecule. "I turned my chair to the fire and dozed," he said. "Again the atoms were gamboling before my eyes. This time the smaller groups kept modestly in the background. My mental eye, rendered more acute by repeated visions of this kind, could now distinguish larger structures, of manifold conformation; long rows, sometimes more closely fitted together; all twining and twisting in snake-like motion. But look! What was that? One of the snakes had seized hold of its own

tail, and the form whirled mockingly before my eyes. As if by a flash of lightning I awoke."[1]

Though his proposal of the ring shape of the benzene molecule did not meet with immediate acceptance due, perhaps, to its dubious birth through revelation or precognition, a photograph of the molecule taken with an electron microscope some eighty years later proved him to be precisely correct. Yet, until his vision, the molecule had no reality of its own even to him. His perception of it through a vision gave it reality to him, whereas before it had been more of a vague theory. It was as if his mental eye, as he called it, had been too clouded by a faulty cornea to see but had suddenly, for a split second, cleared enough to allow him his historic sight. His mental eye was, as has been shown, not something to discuss as if it did not exist but was a very real sixth sense, the same one possessed by all of us though remaining latent and unknown most of the time.

A physical object has undisputed reality because it is so readily perceptible to our more developed senses, but other things seem less real to us, not because they are less real but because our senses capable of perceiving them are less developed. That is to say, a thing we have not seen for some time, such as our home town, has more or less reality to us depending entirely on how able we are to recapitulate a vision of it in our mind through memory, making memory, in turn, a sixth sense, perceiving in as true a sense as seeing or hearing.

Though everything is the product of imagination (as some have suggested), it is not the product of our imagination but of a Supreme Imagination. Hence, nothing can be controlled or subjected to the will of man except within the framework of the Supreme Imagination (laws of nature). This is what gives us objective continuity. As the

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1. Alexander Findlay, *A Hundred Years of Chemistry*, pp. 43-44.

moslem so wisely says about accomplishing any proposal, "En-shah-llah." (meaning, "If it is the will of God.")

From the point of view of science, Mr. Science himself, Dr. Einstein, said, "My religion consists of a humble admiration of the illimitable superior spirit who reveals himself in the slight details we are able to perceive with our frail and feeble minds. That deeply emotional conviction of the presence of a superior reasoning power, which is revealed in the incomprehensible universe, forms my idea of God."[1] Like most of his fellow scientists at the top level, Einstein believed in what is called, a Cosmic Intelligence. His study of nature was profound enough to impress upon him the humble acceptance of something greater than himself, for though lesser scientists are willing to admit that man is insignificant compared to nature, few are willing to admit, as Einstein did, that there are some things man can never achieve, such as the understanding of this, "incomprehensible universe."

Consequently, he definitely did not believe in an anthropomorphic God. The obvious limitations of man and the special conditions causing man to be what he is, show most thinkers the unlikelihood of God resembling the terrestrially designed man. After all, what good or logical reason could there possibly be for the Supreme, All-embracing Essence to have legs or arms or other worldly tools? It is not so much that God could not have these things as it is that He would have no use for them. They would be an absurd, meaningless set of appendages, and God is by no means absurd.

On the other hand, some go too far in assuming that any belief in God as having characteristics similar to those peculiar to man is anthropomorphism, when in truth, it is not. It should be logical now to realize that anthropo-

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1. Lincoln Barnett, *The Universe and Dr. Einstein,* p. 118.

morphism stems basically from race immaturity, but it should also be apparent that even in the past where this anthropomorphic presentation has occurred, it was done in such a way as to allow those receiving the knowledge—limited as they were in comprehensive abilities—to follow the Message Giver and at the same to allow for true interpretation later. What more brilliant description of the origin of man can be imagined than that in Genesis, "And the Lord God formed man of the dust of the ground, and breathed into his nostrils the breath of life; and man became a living soul."? It allowed people of long past ages to be satisfied about this question, while keeping the door open to the realization that man is constructed of the same elements as the dust . . . atoms. Therefore, we should understand that the use of anthropomorphism does not indicate fault. Rather, it indicates wisdom.

To those who would believe in God as being so separable from the order of things as to be contained in a human body, anthropomorphism may still hold a fascination, but for others it does not. Surely man resembles his Creator in many details, but the Creator does not resemble man. That is to say, though God created man in His image, man tries to create God in his image. In reality God is far above comparison, Powerful and All Pervading. Though materialists say, "If God is supposed to be the Giver of Life, why is it we can create life in our laboratories? Does this not prove that we can do what only God is supposed to do and that there is, therefore, no God?" The answer is, of course, "No, it proves nothing!" It is true that man can create simple life under certain special laboratory conditions, using certain phosphates and the proper environmental control, but it does not displace the Supreme Intelligence as the Life Giver. All it does is explain *how* God goes about it. The science with which man performs the miracle is the creation of the Supreme Scientist and the chemicals used are the

tools the Master Chemist gave him. Though man produces the chemical environment, there is one thing he does not provide . . . the life force itself. It cannot be bottled; it can only appear when the conditions are right. Man merely uses those natural laws which exist to produce life, and doing so, he but acts as another natural means in a complex process.

Back to the concept of a Cosmic God, however, which is so opposed to that of an anthropomorphic God and which is the belief of many people today, we find that its greatest conflict is with the religious concept of a Personal God. That is, the Cosmic God concept of Einstein seems to be incompatible by definition with that of the Personal God, and where the concept of a Personal God is upheld primarily and almost solely by the followers of formalized religion, the scientifically minded man holds, almost as exclusively, to the concept of a Cosmic God. There seems to be practically no crossing of the boundaries in this question and still less, if any, dualistic choosers.

Einstein, expressing the side of reasonable science, said, "Nobody certainly, will deny that the idea of the existence of an omnipotent, just and omnibeneficent personal God is able to accord man solace, help, and guidance; also, by virtue of its simplicity it is accessible to the most undeveloped mind. But, on the other hand, there are decisive weaknesses attached to this idea in itself, which have been painfully felt since the beginning of history. That is, if this being is omnipotent then every occurrence, including every human action, every human thought, and every human feeling and aspiration is also His work; how is it possible to think of holding men responsible for their deeds and thoughts before such an almighty Being? In giving out punishment and rewards He would to a certain extent be passing judgment on Himself. How can this be combined with the goodness and righteousness ascribed to Him?

"The main source of the present-day conflict between the

spheres of religion and science lies in this concept of a personal God."[1]

From this explanation of the scientist's position we can visualize certainly how a Personal God would appear to be in contradiction to the observable order of things and how incompatible the two ideas seem to be. However, as in so many things, the situation is not always as it appears on the surface, for there is yet a third possibility, rejected by most because of its apparent impossibility. This is the seemingly incompatible dualism of both a cosmic and a personal God. Off hand, they seem incontrovertibly separated from coexistence due to their very definition; but again, this is only an apparent situation due to lack of understanding and knowledge about other relationships in the universe. For in truth, the two do exist side by side without any logical interference. That is, if we realize the existence of unknown laws, we can see our way clear to accepting the dual existence of the two concepts.

Where a Cosmic God establishes a complex of laws, some of which affect human society even, and allows these laws to govern all situations without exception, the Personal God may take exceptions to His own laws in altering the course of nature to the benefit or detriment of a human personality. In this way, the Cosmic God produces those laws deemed satisfactory and takes no personal interest in a human outside of that human's functions within the system of absolute laws itself. The Personal God, however, takes a personal interest in a particular human being to the extent of actually abrogating His own established laws on occasion. This means, consequently, that the two are opposed concepts and apparently could not possibly both exist at the same time. Either the Creator does or He does not take a personal interest . . . or so it would seem.

Supposing, however, that there were a law in the com-

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1. Albert Einstein, *Out of My Later Years,* pp. 30-31.

plex law system of the Cosmic God providing for personal action. Could we not then have the two concepts existing in one?

Take, for instance, a similar situation regarding a simple magnetic experiment. If we were to take a magnet and pass it over a small pile of iron filings, the untutored mind might be tempted to suppose that the experimenters were powerful enough to abrogate the law of gravity in making the iron filings leap up to the overhead magnet. He would say we were violating the law of gravity . . . a prime law of the universe. However, we know that in actuality, rather than violating the law of gravity, we are forcing the iron filings to apparent violation by superimposing a stronger force at the particular instant. At no time is the law of gravity failing to exert its influence on the filings. It is simply that the magnetic force is stronger than the force of gravity under those circumstances.

Similarly, suppose that a car is proceeding along a highway at a high rate of speed when it suddenly has a blowout. One of the passengers instinctively calls out, let us say "Oh God, help me!" and by a miracle the car makes a complete flip, landing relatively undamaged on its wheels again. We could explain it as a phenomenal freak of coincidental accident—the tire buckled, the wheel base caught the pavement, and momentum hurled the entire car body over to its wheels again—but it might also be explained in other ways. That is, something about the passenger's appeal, "Oh God, help me!" could have automatically invited into play an interceding force of natural but unknown character . . . the action of a Personal God. This does not mean to imply that a certain series of code words, spoken at any time, was the key to the invitation, but that a myriad of aspects—intonation, attitude, verbal force, etc.—were possibly responsible. Again, it does not mean that the invitation necessarily had anything to do with what might have been, otherwise, a perfectly natural result of the simpler laws of

friction, momentum, etc. It means only that such *could* have been the case; and if so, it would show how a natural law makes a Personal God out of a Cosmic God.

In another similar case, a car might have had the same accident but all the people be killed. To some this would argue against the existence of a Personal God, because it would seem unreasonable to expect such an Omnipotent Being to take a personal interest in particular individuals while allowing others to die. However, this is ignorance of the system. In the one case, an invitation was successfully issued, unleashing the power of intervention, while in the other case, the invitation was not issued, even though the physical words might have been uttered. We certainly cannot hold the Force responsible if the appeal was not made. In the same way, we know that potential sounds are in the atmosphere constantly, riding on electromagnetic radio beams, but we cannot expect to hear this music unless we turn the switch of the radio on. If we fail to turn on the radio, can we blame the radio station?

More broadly speaking now, the compatibility of a Personal God and a Cosmic God concept is not difficult to accept reasonably once we understand that there is, within the frame work of the natural order of things, a law of intervention somewhat akin to psychokinesis, which permits a cognizant mind to utilize powerful but unknown forces in overruling less powerful ones. In this way, the personal attention of the Supreme Intelligence is made available to any person without preference. The selection is done priorly by the development of the individual and his ability to recognize and use these unknown forces, not by the Creator Himself. It is, one might say, the scientific explanation for prayer. At the same time, there is nothing disorderly about this intervention since it is a lawful, orderly functioning of the system. It is by no means a whimsical action, though it may appear whimsical to the casual observer.

Another important point raised by Dr. Einstein in refer-

ence to a Personal God is the one regarding reward and punishment from an omnipotent God. It would, indeed, seem illogical, or at least inhumane if the Supreme Being, in His great might and power, were to punish man for doing something which He, Himself, the Almighty, the Omnipotent had ordained. However, such a consideration involves several misunderstandings which, as usual, cause only an apparent conflict. That is to say, first one must begin to question his concepts of what is meant by reward and punishment before he can draw conclusions on their relationships to a God, personal or cosmic.

Punishment is not something meted out by a vindictive God in a revengeful flurry. On the contrary, it is something like cold with respect to heat or light with respect to dark. There is no such thing as cold actually—there is only the absence of heat—and there is no such thing as dark—there is only the absence of light. In the same manner, punishment is the result of failing to follow the natural laws, while reward is the result of following natural laws, including the laws of Love, Justice, and Mercy. The result of walking off a high cliff is a rather rapid descent. It cannot be considered as punishment in the sense of vindictive retribution if one is foolish enough to walk off the cliff; it can only be considered as the result of failure in the individual to respect the law of gravity. Also, it is quite possible that what seems like severe punishment is in reality a blessing, as in the case of a child being spanked for going too close to the edge of our cliff mentioned above. Would the child look upon the spanking as punishment or as the saving at some future time of his life?

Finally, as for a description of God, it is impossible. He is that Being, as Einstein said, "revealed in the incomprehensible universe," that Being giving everything meaning and continuity by His existence, that Being Who created even those things beyond the scope of our imagination, much less we, ourselves. How, then, can we hope to de-

scribe in finite terms the Infinite? How can we presume to draw a picture of Something more incomprehensible than the incomprehensible universe? There simply can be no description—not even the ever handy mathematical one—for it is here that man reaches his limitation, the finite trying to comprehend the Infinite.

However, this does not mean that man is entirely lost in his quest for understanding of the Creator. He can know something *of* the qualities or attributes of God, His Love, His Mercy, His Justice, etc., and in seeking a key to unlock these mysteries, we should, perhaps, go back to an ancient writing purporting to be the word of the Cosmic Intelligence, Himself. In the first book of the Bible, Genesis, it says, "And God said, Let us make man in our image, after our likeness": Here some people have been misled into rejecting the brilliance of its revelation by assuming it to be an anthropomorphic description of God, when in actuality it is a non-anthropomorphic description of man. Its ageless function required it to serve a dual role, one to the ignorant past and one to the enlightened future. The image refers not to the physical likeness but to the possession by both man and God of common likenesses, though it can even mean a physical resemblance, where the human mind realizes only in real terms.

This means that man can approach an understanding of the Creator through something tangible to him which has some of the Creator's qualities or attributes. Consequently, an understanding of the nature of the Supreme Intelligence can be approached through observation of anything, a rock, a shell, a wave, a mathematical problem, an emotion, or a drop of water, since everything manifests some characteristic of its Creator. On the other hand, the thing having the greatest number of attributes and thereby being the most important one to study, is the one having so many attributes as to have been specifically designated as being created, "in our image." . . . that is, man himself.

"Dost thou reckon thyself only a puny form
When within thee the universe is folded?"

'Alí

MAN

To MANY, man is but a very intelligent animal, walking upon the earth erect and harnessing the forces of nature through his superior endowments of ingenuity and sagacity, but to others man has within himself a quality not found elsewhere in the universe . . . something immortal . . . something beyond his atomistic nature. The latter is, of course, the one arrived at here, but the stand on the side of immortality is more than the logical recognition of noumenal elements in the universe. It is also the result of the critical appraisal of contrary propositions and the preponderance of physical as well as noumenal evidence leading to such a conclusion.

The Darwinian theory of evolution, long accepted generally as the true picture of growth, told us more precisely than ever before the way in which living things develop. It showed how living organisms, including man, began in the simplest of conceivable forms and then progressed step by step into whatever degree of complexity their environment let them. Why some became complex in one way while others developed oppositely or differently under almost if not identical conditions was never explained adequately, but everything from tadpoles to the stages of the human fetus indicated the truthfulness of the theory.

The biggest problem, however, arose over the question of man's ancestry and his relationship to the rest of the animal world, especially the great apes he resembles so closely. Some maintained on biblical authority that man was no

relation to any of the other animals, but the very obvious similarities of man to ape or ape to man led most to draw the conclusion that the two are related. The bone for bone matching of the skeletal system, along with so many other remarkable resemblances, seemed to support the kinship; but then, few stopped to consider that but for a matter of degree all living things are somehow related. Under such a consideration the obvious kinship might be allowed to rest.

Instead, the conclusion was drawn that the ape was the direct ancestor of man (or more correctly that they both descended from a common ancestor), and though the conclusion could be no more than a theory, it became entrenched to such an extent that others were ridiculed and search for truth in this particular subject became almost exclusively a search for justification. The missing link between ape and man, a theoretical proposition, became the prime target of investigators trying to prove their point, and though many such missing links were reported from time to time as having been discovered, nothing ever really materialized beyond some vague reconstructions. Indeed, the Piltdown man, long held by many (but not all) as the final proof of the ape's ancestral relationship to man, was proven only a few years ago to be a fraud. The so called missing link became so thoroughly accepted that today we tend to take its undiscovered existence as being practically axiomatic.

The fact, however, that no tangible evidence has been found to support more than speculatively the accepted ape origin theory, has been a serious matter of irritation to its proponents and an increasingly more difficult thing to pass off lightly. On the other hand, there is the dawning realization that most probably man will never find conclusive tangible evidence to support either side of the argument. The solution, hinging on delicate definitions of what constitutes man and what does not, is simply too arbitrary to

be tied down factually. In the mean time, the battle over man's origin continues. As a matter of fact, there is much to indicate logically, at least, that man is not either a descendant of the ape or even of a common ancestor.

Can we say, for instance, that environment controls growth entirely in the face of the recent discovery of the living fossil, the Coelacanth (Latimeria chalumnae) in waters off Africa and elsewhere? Supposedly extinct for some sixty million years, this ancient fish form suddenly made its appearance in our modern world of rockets and atomic fission. Furthermore, the fact that no two specimens captured were identical in form indicates that it was in a process of rapid evolution . . . more rapid, in fact, than is usually assumed to be possible. That is, whereas we generally think of evolutionary changes taking place over thousands or millions of years, the Coelacanth shows noticeable variations within a very short time, even simultaneously.

What questions this should raise in our minds, then, with respect to our theories of evolution. It should make us wonder why a creature so long extinct could develop now, if development is due purely to environment. For, if we assume that the earth's chemistry and temperature have changed since the Coelacanth first appeared, the environment producing the Coelacanth then and now are not the same, and if we assume that the environment has not changed much in the past sixty million years, we are left facing problems equally as difficult to surmount, such as why life now and then is in fact so different. Also, we must answer as to why any pure accident of nature, depending entirely on environment, should appear twice under varying conditions with such purposeful design as a complex living organism must have. Surely we cannot assume that the Coelacanth has merely been dormant or hidden in some dark recess for sixty million years just waiting to emerge at an opportune time. If so, how can we explain its evident

rapid evolution now? We cannot assume logically that it should remain relatively unchanged for sixty million years and then suddenly evolve so rapidly as to leave no two specimens the same.

Obviously, all living things, like all other material things, evolve or develop from a simple state. It is the very process of creation. However, they do not seem to develop purely as a result of environment and survival of the fittest in adaptation. There appears to be a basic plan behind the development, guiding the process toward an ultimate product. Though environment probably determines which forms will survive, which ones may dominate, and which stage of development will be arrested or allowed to proceed, the form itself seems to have an ultimate, predestined constitution. That is, another answer to the problem of evolution is that every form begins in a very simple seed cell of life, but that each cell contains an aggregate of potential characteristics different from the next cell. In this way, though many creatures would have started life as similar one celled animals at the time man did and under the same environmental conditions, each would have developed into distinctly different beings. In the beginning, then, we can see how though man looked like any other similar cell, he was still man, potentially. He could become nothing else and no other cell could develop into man regardless of environment.

We might say that this cell was not man according to our understanding, but we must also question what we mean by man. Is the human fetus, in the shape resembling a tadpole, a tadpole or man? Is the human fetus, when it has a tail, some kind of a monkey or man? Is a child of two, who has the intelligence of an ape, an ape or man? Is a baby two feet long a man or is a man a creature between five feet and seven feet tall?

A human embryo may look identical to a chicken embryo at one time, but the two are vastly different. No en-

vironmental conditions can possibly change the chicken embryo into a man or vice versa. In the same way, an acorn may look like some other nut, but no environmental control can force the acorn to develop into a palm tree. Therefore, we can say that an acorn is an oak tree, even though it may not be recognizable as such. To call it an acorn is no more than to specify its stage of development. Similarly we can say that the child, the human fetus, or the original seed cell of man is man; to use another name is merely to specify the state of development attained at the moment of recognition.

Along with this, we must understand what we mean when we talk of potential characteristics, because these potential characteristics are what give man his special distinction. This means, too, that there is something setting man apart from other creatures, just as there is something setting any creature apart from another. That is to say that though all distinctions are relative and meaningless except to a perceptive mind, there are, obviously, differences by virtue of the fact that no two things are identical. We can agree in principle that all distinctions are arbitrary, but we can also realize that for the purposes of thought, we can distinguish nature in groups of likes. Thusly, it is not unreasonable or unrealistic to question, as have many people in the past, as to whether or not there is some particular thing or things distinguishing man from the animal world (in general) in as much a degree as the general distinction existing between the animal world and the vegetable kingdom for instance. It does no good to point to the obvious similarities in an argument against calling for such a distinction, because in the broadest sense, there is no distinction existing between anything. Therefore, let us be content to recognize a distinction if it exists without assigning unreasoning motives to those who support it.

In the Koran, the Moslem holy book, it says, "Verily We created man from a product of wet earth; Then placed him

as a drop (of seed) in a safe lodging; Then fashioned We the drop a clot, then fashioned We the clot a little lump, then fashioned We the little lump bones, then clothed the bones with flesh, and then produced it as another creation."[1] Here we see, perhaps, what constitutes an early expression of this difference between man and the rest of creation. In the last part it tells how, "another creation," was created from an already formed creation. The same idea also seems to be found in the Bible where it says, in Genesis, "And the Lord God formed man of the dust of the ground, and breathed into his nostrils the breath of life; and man became a living soul." (Genesis, 2:7) Here it tells how the Creator supposedly formed a material being and then added something to bring about a new creature, man. It indicates, as many believe, that what constitutes man is more than the sum of his physical properties, intelligence included.

Hoyle says, "The interstellar gas and most of the stars are composed of material like the Sun, not like the Earth. You must understand that, cosmically speaking, the room you are now sitting in is made of the wrong stuff. You, yourself, are a rarity. You are a cosmic collector's piece."[2] That is to say, the complex elements (mineral world) of which we are made, and this naturally includes our earthly environment, are not the same as the vast majority of the universe which is interstellar gas and stars. The more complex elements were formed, Hoyle shows, by the process of elemental transmutation (in a hydrogen reaction) occurring at the hot, condensed center of a supernova just prior to its violent explosion. From this explosion resulted the mass groupings of complex elements known as planets, and we can see how man, in turn, is the most complex creation produced on them.

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1. M. M. Pickthall, *Glorious Koran,* p. 248 (Surah XXIII:12-14).
2. Fred Hoyle, *The Nature of the Universe,* p. 86.

Physically, then, man is the most complex thing among a world of relatively complex things, but while his physical being is the most complex thing known, he is evidently vastly more complex by the addition of a multitude of noumenal aspects, abilities, relationships, forces, or things which can and do eventually transcend the limitations of the observable universe. These additional things are manifestations of what is known as the soul, which though it is uncreated and intangible, is very real or existing.

In the Bible, after God had created Adam, the first man, it tells how Adam's son Cain went into the land of Nod and married. Therefore, it seems off hand to contradict itself, since the woman Cain married in Nod must have been other than his own sister. However, if we conceive of man as being possibly different from homo sapiens, such a thing could actually have happened. That is, supposing, for instance, that Adam was the first man in that he was the first developed product of the original seed cell of man to reach a state of full fruition. It would be tantamount to saying, on your son's twenty-first birthday, "Now, my son, you are a man," meaning that he had reached the stage in development fitting your description of what constitutes a man. He had not changed physically but suddenly he had become a man.

Going on, then, if we are willing to recognize the reality of noumenal essences and the relative nature of all distinctions, we can see how there is both logical and tangible evidence to support the contention that man is not merely an animal erect with a superior brain. We can even go farther to separate all of created (integrated) nature into four broad but equally distinct categories. They are . . . mineral, vegetable, animal, and man; where the mineral is pure material; the vegetable is mineral with the additional attribute of augmentation or growth; the animal is made of material and possesses the power of augmentation but

also has sensual perception; and, man has all these plus the power to intellectually investigate outer phenomena. Though it is true that there are some examples in each which appear to have attributes of another state, such as sensually perceptive plants or insensitive animals, it is not difficult to recognize this as poor identification. After all, besides the natural errors we are subject to due to the imperfections of our instruments and incompleteness of our knowledge, identification is complicated by lack of knowledge about potential attributes. That is, man could be mistaken for a mineral, a vegetable, or an animal, depending upon what stage of development is observed. Even then, the faulty identification could be the result of insensitive observation, for a perfect perceiver would observe even the potentials.

From all this we can realize now that though each state contains characteristics lower than itself, it has never been in the previous state. It may have been through the previous state but even at that particular time, it had the potential characteristics of its intended state. Therefore, the strict Darwinian theory is inaccurate to the extent that potential characteristics, not being obvious, have been ignored. The species of man (not homo sapiens) has existed since the origin of the universe, previous even to the formation of our planet, and it has gone through all the states of existence, including mineral, but has always been and always will be man, with certain characteristics and a certain eventual evolvement.

Continually striving, like all created things, to achieve his proper place in the universal scheme, man can never achieve the perfect balance of his characteristics, which serve him as a standard of perfection to aim toward. He can only approach it in an asymptotic manner, each one adding an aspect to the perfect totality. In this way, he, like his environment, is involved in the seemingly endless

variety of minerals, vegetables, animals, and man, for though each contains a uniformity in quantity of these characteristics (originally), they contain a diversity in the expression of the individual characteristics. Man, having the unique ability to determine his own fate and control the conditions affecting the expression of his characteristics, has a single standard of perfection to aim toward. However, since the standard is intricately complex and vast, the effect is one of a multi-standard becoming more unified as a single standard when one approaches its realization more closely. The standard which a mineral or animal approaches is a facet of the nature of God, whereas the standard man approaches is God Himself, since man is that being created, "in the image of God," or possessing inherently the complete balance of nature. At the same time, it does not mean that man can become God, because though he possesses potentially all the perfections of God, including free will, he does not contain the essence of these perfections but only the emanations from the Essence. He reflects, he does not generate. God, on the other hand, is the Source, the Generator on Whom everything is dependent. Without Him everything is meaningless, even the perfections, which are, by definition, the reflections of the perfect nature . . . God.

Conceiving of man in this way, therefore, it must become obvious that man is not unique to the planet Earth but is probably spattered throughout the immensity of creation, fulfilling his station everywhere. Whereas we might expect philosophy to be alone in such a proposition, ordinarily, science generally accepts it as the probable situation. Hoyle estimates the number, in our galaxy alone, of planets suitable for the support of life at anywhere between 1,000,000 and at least 100,000. He then goes on to discuss, from a purely objective, scientific view, the possibilities of life on these planets. "Our next question is:" he writes, "will living creatures arise on every planet where favourable

physical conditions occur? No certain answer can be given this, but those best qualified to judge the matter, the biologists, seem to think that life would in fact arise wherever conditions were able to support it. Accepting this, we can proceed with greater assurance. The extremely powerful process of natural selection would come into operation and would shape the evolution of life on each of these planets. Would creatures arise having some sort of similarity to those on the Earth? The distinguished biologist, C. D. Darlington, has shown that this is by no means as unlikely as it seems at first sight. To quote Darlington's own words, 'There are such very great advantages in walking on two legs, in carrying one's brain in one's head, in having two eyes on the same eminence at a height of five or six feet, that we might as well take quite seriously the possibility of a pseudo man and a pseudo woman with the same physical resemblance to ourselves . . .'"[1] This possibility of intelligent life on other planets may be abhorrent to many who have been used to superiority on earth so long and who would hate to think about something elsewhere being more powerful, but to deny it is more of a hope than a logical proposition. The ancient Incas of Peru might well have wished that the Spaniards had not existed, but this would not have prevented the superior Spanish forces from inflicting the bloody and unwarranted conquest which they did, in fact, perpetrate. To those, also, who would assume a position of particular and exclusive favor to the Creator, this idea is abhorrent, but their own assumption, ridiculous as it is even on our limited earth, is even more ridiculous cosmically speaking and may succumb to the influence of extraterrestrial assumptions of a similar nature.

If we begin to see man as he really is, broader in essence than the petty limitaitons of color, configuration, and

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1. Fred Hoyle, *The Nature of the Universe,* pp. 95-96.

even planetary origin, these fears will pale into nothingness. Today our world is in the grip of racial intolerance in which each race thinks itself superior to another. Some think their own nationality is superior, or their particular color of eyes or hair, but all such arguments are without mature, rational substance. What does color or shape matter? No two men are the same shape or color. Truly lonely would be the man unwise enough to follow the logic of racial segregation consistently. We must, rather, realize that what makes man, man, what separates him from the animal is his spirit, his noumenal qualities, not his physical condition.

In this light, we can see that a man on another planet would not necessarily fit into our particular definition of what constitutes the species homo sapien but he would still be man, since he would possess the noumenal characteristics distinguishing man. He might have superior mental abilities, but he would not be a superior creature in any sense except in the degree of expression of his potential attributes. He would not be a pseudo man or pseudo woman as Darlington expressed it, not in the finest sense. Wherever man is, he *is* the center of the universe, his love and his thoughts.

Since man is the culmination of the universe's attempt to reflect the perfections of the Creator, man carries the tremendous burden of responsibility for fulfilling his special function. Though he is not greater than any other entity with respect to its own function, man is greater with respect to his responsibility. He should look upon the earth, the stars, the trees, and the mountains with a humble realization of the effort made on their behalf to produce him. He should, as the Indians of the forests, respect the mother earth and strive to fulfill his obligation by living nobly. When his feet tread the earth it must be with dignity, when his machines suck energy from the ground it must be with humble gratitude, when his abilities harness the powers of

the stars it must be with respect, and when his blood stains the land it must only be in the nobility of sacrifice. When he does otherwise, he is no longer *man* but an animal.

What Now of Man as an Individual?

Why is it that we, including many of our greatest minds, do not have the slightest notion of the reason why we exist? What is the purpose of man worshipping God? And, what is this thing called death? These questions, so seemingly simple but yet so terribly unfathomable, have puzzled us for untold ages and have kept us sometimes in a state of fear almost . . . fear of an unpleasant answer, fear of an unknown factor. Yet fear of the unknown, like all such superstitious effects, is found to be completely unwarranted when the truth is finally discovered. The truth about natural occurrences (even those seemingly unnatural ones) can never be unpleasant upon being discovered and understood fully, because man is a part of the natural order and by nature cannot have a fear of his fully known natural fate. Fear is, rather, the process of an imagination struggling to conceive. A truly mature man is one who can have no fear, because he knows that his natural being cannot be anything but in perfect tune with nature and emotionally thrilled by the dictates of his natural fate.

Man's failure to understand the reason for his existence is partly because the subject is difficult enough so that he simply has not been able to get around to it yet intellectually, and partly because he often chooses to ignore what information is given to him through such things as revelation or intuitive knowledge. However, there is another important reason shown to us, perhaps, by the somewhat significant and simple fact that such ignorance does exist. For instance, it is interesting to notice that Jesus of Nazareth taught in the puzzling medium of parables. He could have spoken directly and more understandably without

resorting to parables, but He chose otherwise. It is claimed by some that He spoke in parables to be more easily understood, but this is contrary to His own claims. That is, in answer to the question of why He spoke in parables, He said, "Because it is given unto you to know the mysteries of the kingdom of heaven, but to them it is not given. . . . Therefore speak I to them in parables: because they seeing see not; and hearing they hear not, neither do they understand." (Matthew, 13:11-13) Thus it is obvious that there is a deliberate attempt at times to make this knowledge selectively inaccessible. Therefore, one of the fundamental processes of man is the solving of this very problem of why he exists. As the quotation heading this chapter implies, for man to understand himself is for him to understand the universe. This, in turn, is for him to understand his Creator, impossible though it is. Conversely, for man to worship God and try to understand Him is for man to learn about himself, to become at ease with his surroundings, and conquer the only thing standing between him and his every desire . . . himself.

Now, in as much as man is distinguished by certain special qualities not contained elsewhere in the universe, his responsibilities as a being or purpose must be, as was stated before, to develop these special characteristics to the greatest extent possible. To fail to develop the prime characteristics in favor of the secondary characteristics (those contained in other creations such as the mineral or the animal) is in actuality failing to develop at all. It is, instead, the reversion of the natural process or an attempt to remain static and shirk one's responsibility . . . to be ungrateful to the whole struggling scheme. This, in itself *is* evil, for evil is not a positive force, but rather, failure, and heaven is knowledge of success, though this does not mean *any* failure or *any* success. It means only success or failure toward the intended goal of knowing the Perfect Balance of Perfections (God) and achieving its realization (the presence of

God). Also, it does *not* mean that the secondary characteristics are evil or unwanted. It means only that they should take their proper secondary place and not assume primary importance. All the qualities of man are good—man is born good—and even such a thing as lying can be good under certain circumstances; however, each man has the responsibility for learning to discern between good and evil, or in other words, for developing his primary nature to such an extent that he innately abhors evil or retrogression and loves good or progression. This is his aim and his purpose.

In achieving this end, man has at his disposal all the tools of life, for everything in life is designed to produce the desired result, and though the going is not always comfortable, this is because the developing process always requires an output of energy. If one desires to develop large muscles, he must do more than sit in the middle of the floor and wish for them. He must build his muscles by exercising them. In the same manner, if one desires to develop spiritually, he must do spiritual exercises. To wish is not enough. He must find the proper exercises and work them over and over until the effort is negligible. Then he must increase the exercises and labor some more. Only thus can a strong physical or spiritual body be built.

To cite an example of this, one of the most effective tools in this process of living is through the man-woman relationship of marriage, which any married person will testify to as certainly being a chain of spiritual push-ups. In the animal state, the creature is helped to achieve his purpose by Love, since his prime purpose is merely being what he is and producing more of the same. In man, though, Love is used voluntarily as a tool in not only procreating but in developing his primary characteristics, one of which is the ability to use Love itself. From this, it follows that the basic unit therefore is not the individual but the spiritually mated couple, that neither is a complete unit alone but is half of a balanced, cooperative whole. It is, inci-

dentally, the same thought presented in the Koran where it says, "He it is who did create you from a single soul, and therefrom did make his mate that he might take rest in her."[1] Together they form a mutually assisting, complimentarily progressing unit, achieving their advances through the strong bond of love. It does not matter particularly whether or not they get along or have the same opinions and likes as long as there is within their inmost recesses (the soul) a strong eternal bond of love and attraction, for this is the one thing of lasting importance; the others come and go. Love, binding them together, acts as a cohesive force of far greater significance than intellectual decision.

Consequently, a frequent mistake of the spiritually nouveau riche is the misplacing in importance of the intellect over love. The classical example of Cyrano de Bergerac tells of a woman, Roxanne, being deceived by her physical attraction for the handsome nonentity of Christian when in actuality her true love is for the ugly Cyrano; however, in true life the fear of such a thing frequently works in the opposite way. That is, one is prone to assume that physical and spiritual attraction are opposites when they are really quite concomitant under ideal conditions. Just as a body craves certain foods to fill deficiencies. The craving, in turn, which is far more significant than its one facet of physical procreation, can sometimes help to determine the soul's spiritual needs better than an objective examination. Unfortunately, it can be fooled into a poor choice by a weak or poorly conditioned spiritual mechanism, but the general attitude of linking spiritual value with ugliness, repulsiveness, or insipid impotence is a grave mistake. All of us have certainly thought certain people to be physically attractive who were quite plain by the standards of others. This could very well be the effect of disguised spiritual attraction. That is to say, while Schopenhauer brilliantly pointed out the

1. M. M. Pickthall, *Glorious Koran,* p. 136 (Surah VII:189).

process of natural genetic selection by physical attraction, the process must also be considered from the point of view that man is more complex than an animal. He has a guiding noumenal force, the soul, which, in a natural process identical in character to physical selection, helps the individual choose a helpful spiritual mate. The primary object in being for man still is not a comfortable home, a secure living, or a frictionless partnership; it is to love and to learn more about the Creator . . . to understand oneself in maturity.

As to the relationship existing functionally between these two halves of a soul, man and woman, Schopenhauer cited historical example, showing that women had never been known to achieve any true greatness, and from this he concluded that women were simply not capable of doing so. However, the fallacy to this argument is that women had never been in a position socially to achieve greatness even had they had the capacity . . . an argument on those grounds is not valid by itself. At the same time, we must understand that equality of capacity does not mean sameness of function.

A man's function appears to be principally decisive and creative whereas a woman's is one of nourishment and development. If we realize that the difference between the sexes is more fundamental than the obvious physical difference, we can see how this affects the separation of function. Otherwise, homosexuality would have a spiritual justification, which it does not. That is to say, not only is there an organic difference between the human male and female, there is a basic noumenal difference also.

It is true that each human being possesses in his or her psychological make-up an element of homosexual capacity, for instance, but then, so does he possess the capacity for all manner of abnormalities, negative directions, and general spiritual decadence. Man (of either sex) requires love to grow spiritually (psychologically), but he may become confused as to the source or nature of the thing he requires,

just as a baby grasps even poisons in its natural growing hunger. Some people, indeed, appear to all intents and purposes to have been sexually misappointed, but this does not mean that there is in fact an error. It means only that for some reason the principal spiritual characteristic has not been allowed to dominate. Just as a person may work himself into a depressed state by allowing himself to think constantly on depressing subjects, he can develop minor characteristics (such as hate or jealousy or homosexuality) into a dominant position. A homosexual is one who pampers his immature attitude into an unnatural position of importance.

Certainly we can see how a woman frequently does creative things in all the lines of a male counterpart. However, the nature of her being is such that these things are secondary, while in a man, her primary characteristics are secondary. Each can do what the other does, but neither can do what the other does to the same extent. This means that though a woman may achieve greatness in the male's primary characteristic, she can never achieve as much greatness in this particular field as the equal male counterpart. Similarly, the male can never achieve his maximum greatness in a feminine field.

The male initiates aggressively a creation and makes the conception, but a woman bears, nurtures, and develops this to its fulfillment. This is equally true of a piece of art or music as it is of a child, and in this way she achieves creative greatness through her mate. A woman may side step her mate in this, just as a man may nurture a created thing, but the arrangement that allows for the greatest efficiency, use of abilities, and satisfaction is the mated pair cooperating functionally in their respective fields.

The greatest thing a woman can do, therefore, is not to pursue a career but to turn her capacity for understanding, love, and formulation into her husband and children. At the same time, no man can succeed to his highest point without

the devotion and aid of his mate. It may be a worn phrase, but it is nevertheless true that, "Behind every great man is a woman." However, what is most often overlooked about this situation is that frequently the greatness is more to the credit of the woman than to the man. In the best examples, the credit is to both.

In summary, therefore, man progresses towards the Creator, accumulating a greater understanding of Him, of the universe, and of himself. The fruit of all creation is the developed soul of man. Man, as an animal (i.e. the part of him which is animal), is the culminating producer in the long chain of imperfect material creation striving to produce the perfections of the soul, but man is also partially the end product; he contributes to the formation of the developed soul of a particular man as a parent, but he, in turn, also contains this culminating product of the soul given him through his parents, and this is what places him in an entirely separate class of being from all others, including the animal. Man, himself, is the missing link, the link between all material creation and the spiritual universe.

Furthermore, it follows that every material thing in the universe is for the furtherance of the *product* of material creation (i.e. the developed soul of man), and that consequently, everything is for man's use. It requires only that man bear the simultaneous responsibility to utilize these for the development of his soul and/or the development of any soul, because when a man misuses the material things, he is either neglecting his responsibility or violating his trust. Both of these are what constitutes *evil.*

Our soul, being uncreated (nonmaterial), has never "not-existed" but has always existed and always will. In our present state, it so happens that the soul has reached finally the point of self recognition. Naturally, therefore, we question our being before birth, since we have no knowledge of any previous existence, but with a realization of the process, it must become obvious that in our primary state

of self recognition, we could not do anything other than question our previous existence. It is quite natural. If we were in a later state, such as after the metamorphosis called death, we would naturally not question our previous state, because with the retention of our imaginative memory of life, we would know that our soul had continued. This whole matter of discussing the point here and now of previous existence would be utter nonsense were it not for the fact that we are, by happenstance, in our primary state of self recognition.

Man does not lose his identity or love for his fellow being or mate because of his increasing and concentrating love for the Creator, since the face of God *is* the face of man. He becomes more and more aware of his fellow being and of the mother earth. It is as John Donne wrote,

> "No man is an island, entire of itself; every man is a piece of the continent, part of the main. If a clod be washed away by the sea, Europe is the less, as well as if a promontory were, as well as if a manor of thy friends or of thine own were. Any man's death diminishes me, because I am involved in mankind.
> Therefore never send to know for whom the bell tolls. It tolls for thee."

"To peace, to Pleasure, and to Love
So kind a star thou seem'st to be,
Sure some enamour'd orb above
Descends and burns to meet with thee."[1]

Thomas Campbell

1. Oscar Williams, *The Golden Treasury*, p. 156.

LOVE

One thing we humans seem to become inevitably involved with no matter how much we might wish to do otherwise is this strange thing called Love. We sometimes like to pass it off in our maturity as being a trite experience of little significant consequence, because we have learned to discipline ourselves against its talons (as Kahlil Gibran describes its effects). Somehow, though, it always manages to grab hold of our inner being. It grasps us in the eyes of a beautiful woman or a handsome man, in the shades of a dying sun, in the pull of a tragic melody, and in the throbbing sight of nature itself. The pulsing of its hold, drawing at the something within us and calling us to some mystically shrouded height, breaks through the finely manufactured barriers of our intellectual rationale and floods our shuttered interior with the light of hidden knowledge.

Why then do we continue to deny it? Like all things we know, it is a natural part of our universe. Not at all limited to genetic selection or the emotions of procreation, it scores us regularly in the arena of transcendent thoughts. We find ourselves molded by its tempering graces regardless of any contempt we may have for it. We might as well deny the ground we walk on or the air we breathe; nay, rather.

Love is something we associate most commonly with the emotional attractions between the sexes, and though this is one of its lesser manifestations, it is the one most familiar to us. Therefore, we can best approach an analysis of it by examining this most familiar aspect, going on to determine

more cosmologically what it is, and then returning to our initial aspect with a broader concept. With a better understanding of the subject of Love from the point of view of totality, we can readjust our concepts about the personal, individual aspect and, perhaps, use the knowledge for practical improvements in everyday living. At any rate, the easiest access is through the door of our own hearts.

Shakespeare wrote,

"Let me not to the marriage of true minds
Admit impediments. Love is not love
Which alters when it alteration finds,
Or bends with the remover to remove:—
Oh no! it is an ever-fixed mark
That looks on tempests, and is never shaken.
It is the star to every wandering bark,
Whose worth's unknown, although his height
be taken.
Love's not Time's fool, though rosy lips and cheeks
Within his bending sickle's compass come;
Love alters not with his brief hours and weeks,
But bears it out ev'n to the edge of doom: —
If this be error, and upon me proved,
I never writ, nor no man ever loved."

How beautiful we find this expression of a love far exceeding that which is commonly reflected in our present day society. With great insight he shows, as we ourselves have probably suspected, that there is an immortal facet to this thing called love which has meaning beside the immediate and ostensible one. Furthermore, he answers his critics in advance with the excellent argument that says, in effect, "I love; therefore it is." Like Descartes, he realized that since we humans must always deal primarily with ourselves, cannot divorce any discussion from the human element, and cogitate of importance, beneficence, and meaning only to

ourselves, our words are no more than words beside experience. He shows us how the physical experiences involving love can be no more than expressions of something beyond the actions themselves. That is, if it is not more than the possessive actions for their own sake, it is not love but a player wearing the mask of love.

Love, then, may be the tool at times whereby we carry out the functions of nature, but it has a fundamental significance beyond its effects on ourselves. Freudian psychology may be able to show that most of our drives are sexual in nature, but it does not go on to question whether or not this sexual drive is an ostensible manifestation of some more basic drive. That is to say, why do we have sexual drives? If it is for procreation, why are we driven to procreate? The trouble has been that when we deal with man we are making a serious mistake to do it on animalistic grounds, for man is far more complex than the physicalistic cause and effect relationship of the animal world. We might like our problems to be answered this simply but wishing so does not make it become true. On the contrary, the intricate and powerful noumenal elements in man give us special problems which no amount of physicalistic arguments can solve under present concepts. When we have grown to realize the ultimate oneness of the noumenal and phenomenal, the existence only of a conceptual barrier distinguishing the two, we will, perhaps, be able to say that physical arguments can touch even the noumenal side of man. Until then, we must look beyond our microscopes for the answers.

Love, drawing and binding us to something beyond our personal relations, must begin to be accepted as a law or force of cosmic, natural import, significant to things entirely apart from man or even life. We must begin to see that rather than man's emotional association with a thing giving it a meaning separate and insignificant to anything but man, man is but an element of the whole, driven by the same powerful forces of nature driving all other elements of the

whole. Therefore, Love is not a part of the universe because it is a part of man; it is a part of man because it is a part of the universe.

Sir Abbas Effendi, K.B.E., great Persian genius of the 19th and 20th centuries, said, "Love is the highest law in this great universe of God. Love is the law of order between simple essences, whereby they are apportioned and united into compound substances in this world of matter. Love is the essential and magnetic power that organizes the planets and the stars which shine in infinite space. Love supplies the impulse to that intense and unceasing meditation which reveals the hidden mysteries of the universe."[1] Reminiscent of a similar proposition by Goethe (die Wahlverwandschaften), this expression of Love as a universal law serves to show us how such a thing can effect us not only in our considerations about the nature of the cosmological laws of physics but can have important ramifications in our personal relations (meditations) other than the attractive power between the sexes. Perhaps in our search for the solution to the Unified Field Theory we would do well to investigate the law of Love. It should not be at all surprising that the basic universal force of attraction would be something showing man to be an integral part of the universal scheme, moved by no special forces peculiar to himself alone. After all, man is but an element of the whole. Whether or not he is noumenal or phenomenal in character, more complex as a unit than any other unified element, possessed of controlling power, or singularly immortal, he is still but a part of the whole. Naturally, the conservative person would prefer to wait until science has determined that the love of a man for a woman and the attractive force between planets is the same thing expressed differently. Also quite naturally, he will then prefer to express it as proving that man's emotional attraction is no

1. David Hofman, *The Renewal of Civilization,* pp. 60-61.

more than the natural laws of attraction in physics. It proves, he will think, that man has no qualities or aspects transcending the limitations of the phenomenal. That is, it will not occur to him that, contrariwise, man's powers and activities are not insignificant by comparison but are particularly significant by comparison, that rather than showing the physicalistic limitations or ties of man's facets, it points out the spiritualistic essence of all material creation. However, the important thing is the recognition of the law of Love as a universal thing whether we desire to call it by the word associated with man's emotions or not. Through ignorance, matter was once assumed to be indestructible but has since been proven to be very destructible, and perhaps with time our ignorance on Love will be lifted, showing us a whole new universe.

Though Love, as a cosmic law, is a law in the same mathematical sense as the law of gravity, it is not divorced from the love one may feel for one's mate, sweetheart, or child. On the contrary, this is the same love, differing only in its intensity, its purity and its comprehensive effects. Consider, for instance, that when a child plays jacks, the same law of gravity is being utilized in her game as when the physicist is studying the trajectory of the guided missile, that man, even the child, is the most complex creation in the universe, and that what is being considered here is an essential characteristic or quality of man. The idea of "raising Love from the emotional level," is in itself, prejudiced, inaccurate, and misleading. One of the basic problems of our chaotic modern world is this particular attitude, whereas the answer lies not in raising ourselves above emotions but in learning about them, gaining a greater respect for them, and in controlling them.

Actually, most of our lives are spent in this struggle to gain understanding, respect, and control of our emotions, and consequently, of Love. On the individual plane, Love is something which must be experienced in order to be

learned. This is what is sometimes called growing up, maturing, or spiritually developing. It is through this experience we develop our knowledge of Love and learn to appreciate it for what it is and control it. Also, it is this experience which, along with the realization and acceptance of Love as a cosmic law, gives us a beginning comprehension of the process known as life and death and the nature of life after death. For, as Love is what makes life worth living, it is also what makes life after death worth dying for, because Love enters into our lives even more after death than before. Therefore, failing to understand or learn about a thing which is so important in our life after death can be the building of our future hell. For this reason, if for none other, it certainly behooves us to individually investigate the nature of Love and try to develop it as a quality within ourselves.

Our first experience with Love usually is a flash of desire during adolescence or perhaps even earlier with respect to our parents. Almost always it is a selfish, blind force and can, when not controlled by some outside influence, result in dangerous complications. This is why we are often so frustrated by our parents in their attempts to guard us, but also why we are usually thankful later that there was this control. Then later, through somewhat bitter experience, we begin to mature and to see Love as more than merely wanting the satisfaction of certain immediate desires. In fact, we can even, at times, come to the point of realizing that love which is selfish is impure almost to the point of not being Love at all. To reach this state of realization is often the greatest struggle of a man's life. Fortunately, though many people never do succeed in their quest, those who do have begun to drink from the chalice that is life indeed.

Consequently, it is difficult for some to realize that such a Love, in its purest form, can be satisfactory, but this is only because the individual has not been fortunate enough

to know it through experience. For the one who has, however, tremendous new worlds are opened to him. Likewise, it is difficult for some to realize that after losing the body, a man can actually be happy and love in the after life. To them, these intangible things are too elusive to seem real or possible and such a thing as death offers a bleak outlook. However, one can see back in his own life as to how similar intangibles took on real and valuable positions with the maturing process, how, as an example, we could not see in our childhood anything pleasant about the bellowing pachyderms of opera and could not believe that our parents did either. We assumed that our parents had been so conditioned and disciplined to the requirements of society as to pretend to appreciate opera in order not to appear out of place. It was, of course, impossible for anybody to really like opera. They might have an intellectual appreciation of it but as to it having an emotional hold on them—obviously a ridiculous suggestion. Then later, we found to our surprise that it became one of our greatest loves and opened magnificent worlds to us, enriching the enjoyment of life a thousand fold. How were we, then, to explain to our children these previous doubts and biased dislikes? The answer is, of course, that it is impossible. Yet, it is the same with Love. How can one explain to those who have not experienced Love in its advanced reality, its possibilities and that it is more than an intellectual proposition?

Still, this is not all there is to Love, this feeling one has for another. We can again make distinctions and divide it into four categories, the love of God for His creation, the love of God for His highest creation (man), the love of man for God, and the love of man for man, the last of which is the primary one discussed thus far. Naturally, each one of these is dependent upon the next one in rank for its existence, and this lets us see how even our basic and crude form of personal love is but the first link in a chain of universal consequence. That is, the unselfish Love of

man for woman can be seen to take its place in the four as in reality the attraction for the divine Love of the Creator, thereby making its essential purity independent of the mistakes or blemishes present in the person containing it. It is a thing which becomes obvious if we consider that this is because we can see the Source of our mental and spiritual energy being reflected, though not purely or clearly reflected, by the soul of the individual loved. Consequently, it is with this type of Love that we can cut through the barnacled casing of worldly lessons surrounding our loved one and grab at the pure Essence within. Powerfully it gives us the means to love in spite of all the attacks upon us, showing us the sight of this beautiful flower within which is often our first real glimpse of the thrills in store for us in this Love of God. From here we can gain a belief in the reality of Love no mathematical proof or chemical analysis could possibly approach.

Then too, if we are fortunate enough, we may even be privileged to have a deep enough look to see that the power of this Love is unmatched anywhere in the universe. Reading the description by Hoyle of a supernova explosion, we are almost overcome by the power of such a mammoth catastrophe. "For a supernova," he writes, "is equal in violence to about a million, million, million, million hydrogen bombs all going off at the same time.",[1] and, "For a few days the accompanying blaze of light is as great as the total radiation of all 10,000,000,000 or so stars in the Galaxy."[2] Yet, when we are introduced into the inner sanctum of Love, when we become aware of its tremendous power, even the supernova takes a second place and is seen to be, actually, a result of this universal law of Love. As overpowering as the one is, the other is more so by an unimaginative amount. It opens to us great new vistas.

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1. Fred Hoyle, *The Nature of the Universe,* p. 77.
2. *Ibid.,* p. 88.

We see potentialities for man which are so tremendous that what we have learned and mastered so far is insignificant compared to what is in store for us. Also, we see clearly how much more potentially powerful man is than any other creature, living or inanimate, and how far from even denting his potentials he is. Yet, before we let our greatness encompass us with pride, we gaze into the vastness of space, and perhaps understand why we should be humble before this universe, before Something greater than ourselves, before something we may even want to call God. It makes us realize that in spite of our greatness, we owe more in gratitude to this One than we could ever express adequately in words. We see His Love as the love of loves, as the jewel among jewels. We become thrilled to our very core in an inexplicable surge of ecstasy, remembering where we found the key to this new realm of greatness and Love.

Without stopping to rationalize, we cry out to our unfound mate, "Oh love, Oh love, Oh love," and in an almost delirious pulse of joy our souls fight to find each other and to cling to each other. Savoring that precious beam of pure Love coming from the inner self of each other, a purity of which there is no comparison, we laugh at the stupidity of letting our intellect hinder us. Now we know why we are alive, with the peculiar effect that life suddenly becomes worthless and beautiful at the same time. For, though we bathe in the beauties of the world, we now have something which transcends its limitations and which holds such sway that the passing of life and its earthly limitations does no more than increase the burning of our love. We are so deliriously happy we cannot even withdraw from our embrace to consider it as happiness. At last we are together. We have conquered our fears and prejudices and loved—loved as we never thought we could. We are now blended as one in an eternal embrace.

Yet still, there is more to come, for our hearts have just tasted the reflection of this pure love, this love dwarfing

the supernova and giving energy to the universe. We can feel its warmth coming from out in the void and drawing us as if by some huge magnet. When at every moment it seems as though we have reached the ultimate joy, still more comes, pouring into us and fueling the fire within. Here we seem to be in a great chorus, knowing fully and unreservedly for the first time the kiss of our mother, the beauty of the rose, the poetry of the ages, the music of the heavens, and a peace that is indescribable. We have not yet reached the ultimate nor shall we ever, but we have traversed many worlds and drawn closer and closer to the Essence of Beauty.

Our lives, spiraling higher and higher to some effulgent peak this way, then, provides its own meaningfulness. Just as the producing and raising of a family gives meaning to a man's life, so does the spiritual aspiration and climb to noumenal perfection give meaning to the force of immortal love. The soul mate arrangement, which is the process often used to explain the complexities of human spiritual ascendance, is not merely one of hopeful fanaticism. It can be seen as a quite logically natural parallel to known physical relationships, for though the physical dependence of one sex upon the other (true of animals also) is not the cause or reason for a spiritual dependence, it does show how the idea of spiritual dependence is not necessarily out of context with the rest of the natural order.

At the same time, where many prefer to believe that any spiritual mating is necessarily a haphazard thing parallel to physical mating, we must remember that the essential difference between the noumenal and phenomenal spheres requires that mating be a matter of blind chance in the phenomenal sphere but a possibility only when perfectly matched in the noumenal sphere. Therefore, the arrangement in the noumenal sphere is necessarily the one proposed where there is by design a certain single perfect soul

mate (other half) for every individual. It may not seem to be the logical answer to us with our terrestrial, Newtonian background but it might be proper (though certainly not necessary) to remind oneself again that neither were the results of the Michelson-Morley experiment.

On the individual level, consequently, the powerful drive for and satisfaction in the spiritual mating cannot be over estimated. Whereas it may not be consequential to any but the individuals involved, the person who has experienced the finding of his spiritual mate will certainly consider little else as consequential to him. To the one, on the other hand, who has not yet found his mate, his loneliness is an ever present thing. He may not know what it is; he may merely feel lost or empty; but, behind it all is a failure to have found this sparkling love. Unfortunately, he is also concurrently at the disadvantageous position of not being able to know just exactly who is and who is not his soul mate while in the phenomenal sphere. This allows him not only to live a productive life with other than his soul mate, but it causes him frequently to misjudge and flee from the one who is. In this way, the turning away is not because the love is not there but because either its power is too great to be handled and recognized by the immature soul or because its own essence is kept unrecognizable by its immature vessel. Nevertheless, the one who progresses spiritually will eventually fall into a love so powerful that all the universe could not compensate for its loss.

How well Carl Gustav Jung's words fit here. "There is no question of belief, but of experience. Religious experience is absolute. It is indisputable. You can only say that you have never had such an experience, and your opponent will say: 'Sorry, I have.' And there your discussion will come to an end. No matter what the world thinks about religious experience, the one who has it possesses the great treasure of a thing that has provided him with a source of life, mean-

ing and beauty and that has given a new splendor to the world and to mankind."[1]

Thusly we have seen the kind of Love described previously as the love of man for man blended with the love of man for God in such a way that both were drawn on by the love of God for His highest Creation (man). Through it we have seen a somewhat integrated panoramic glimpse into this complex and elusive thing called Love, and though it has been seen primarily on the personal level, its importance as a broad, cosmic law cannot be over emphasized. As Love binds individuals, it also binds nations. As it forms the cohesive bond for the elemental constituency of our physical universe, it also is the basis of any effective, organized society. As it may seem to be cheapened by its relationship to the emotional processes of a human individual, it is at the same time ennobled by its manifestation in the human realm of heroics. There cannot be a more refined yet powerful, elusive yet all embracing, subtle yet overwhelming, and hidden yet ostentatious law in the universe. It is the dramatic star of life and matter, wearing the make-up of a clown.

How, then, can we use this concept of Love to better our everyday relationships? How can we utilize this better understanding to improve our social standards and so forth? Certainly, since it is a fundamental law it can be studied and used to advantage just as other laws have been, yet at the same instant it must be remembered that only a few people now will be able to understand and appreciate such a thing as unselfish love. However, the capacity is inherent, and with the growth of man there will come a wider understanding of it. Therefore, though the things pointed out here may seem visionary, they will become more and more practical as time goes by and will eventually even have to be revised to meet further understanding.

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1. Margaret Lee Runbeck, *Answer Without Ceasing,* preface.

To begin with, then, marriage, which has been shown to be the tool for development of the individual, must, in the light of these thoughts, be considered to be such a tool whether it is a good marriage or a bad one, for bad is usually applied to that situation where the frictions are present making it a good developing environment, and good is usually applied to that situation where the individuals have accepted the frictions for what they are . . . something to be overcome. We are continually searching for our soul mate or our purely balanced partner and will at some time find this particular one, yet it is important to realize that the situation of two soul mates meeting is a loaded one, so to speak, and that it could be disastrous. For this reason, we may find ourselves kept from meeting our partner during our terrestrial life span. We may even meet our partner and of our own volition turn away from him, either because the situation is too powerful for us to bear at our particular stage of development or because we fail to recognize him. In any event, we must recognize these things, realize the eventual wisdom in the results, be they popular with us at the time or not, and concentrate on the developing of our capacity to love.

In consideration of the problem of divorce, therefore, we can understand that there is much to be gained in making a marriage work. Hopping from partner to partner, looking for the ever elusive soul mate, generally defeats the intended purpose, since the chances of finding the soul mate are slim indeed, the chances of being deceived into leaving the true soul mate for an apparent soul mate are even greater, and the time wasted in not developing through running away does nothing but prolong the eventual union of love. That is, too often we tend to look for a way out because we do not wish to allow ourselves to develop, and this only serves to postpone the happiness in store for us because we cannot be happy with our soul mate until such time as we are ready and able to handle the potent situa-

tion. Therefore, whether we are lonely for this love or not, it would be extreme folly to want it prematurely, since, like a premature baby, the hurried exposure might prove destructive. At the same time, this does not mean that it is wrong to continually look or wish for the love. After all, desire in itself is not bad, only desire for negative things is bad. For this reason the passion for finding the loved one is truly a good thing and should be encouraged.

As to whether or not the individuals will know when they have found the right mate, this will often be solved by itself, and the more the true understanding of Love is known, the more our chaotic condition subdues, and the higher our world society goes in its moral and truly religious development, the less will this question be of importance. As it is, though, the significant thing is to believe that the partner found is the soul mate, because a marriage entered into without this thought is not a marriage at all but prostitution. On the other hand, though a marriage is one of the most spiritual events of a person's life and should be recognized as such, the position of our development dictates that even with this knowledge, the number of mistakes will be many. We can only hope to use a true understanding of the nature of things to keep ourselves going in the right and eventually most satisfying direction. To this we must give particular attention because it is one thing of prime importance to our own happiness.

Let us realize, then, that divorce is something which no mature person should ever contemplate, since the immature person looks for superficial happiness and a situation of ease, but any two human beings who marry and mature should be able to handle their problems enough to make their marriage work. That is, maintaining a marriage is not merely a desirable thing because of the children or other outside relationships. It is a thing of importance to the individuals themselves whether they have children or not. A marriage is not an entertainment; it is a fulfillment of ex-

tremely deep spiritual and physical nature. Not only is it an obligation and an opportunity to develop great satisfying attitudes, it is one of the most sacred things a human being can ever experience or be exposed to. It is of such deep significance that people would shudder at the thought of divorce could they but understand the beauty and sanctity of marriage in the first place.

One of our great problems today is that in our tragic general immaturity we aim toward the wrong goal in marriage. We look for a partner who plays golf or tennis because we play golf or tennis, thinking that the best spouse is the one we can best get along with in our enjoyment of the same things. However, such an attitude is wrong from the outset. The person thinking thusly does not want a husband or wife; he wants a playmate. Naturally, if one conceives of life as one series of diversions after another instead of the beautiful beginning it is, his attitude befouls his chances of achieving any success in the very essentials of life itself and produces both a tragic final result and an unsatisfactory span of hollow diversions in the mean time.

The best advice one can have under these considerations, therefore, is to find a person who is physically and spiritually attractive and who has the same fundamental appreciation for the essential qualities of life. After marrying the person, then, he or she must remember that when things go wrong (as they most assuredly will) it is his (or her) duty not to fight the marriage or the partner but to conquer what is in himself that causes the problem or allows it to become important. One might as well face the fact that *any* marriage is a matter of personal adjustment and maturation, not of the other person but of oneself. After all, taking medicine may be unpleasant, but the advantages of good health go not to the doctor but to the patient.

If the basic spiritual attraction was present at the time of marriage, it will always be there even though later events

may cause it to become clouded over. This means that sometimes, when the pressure of the adjusting becomes too great, the wise thing is for the couple to separate and allow the pressure to subside and the clouding to fade out. In this way, many people who think that divorce is the only solution will find that the divorce would have achieved nothing but the temporary relief achieved by a separation and would have blackened a relationship which was, except for the clouds of pressure, a beautiful thing.

Let us now look at a parable or two and see how this spiritual element of marriage works, for perhaps in this way we can learn how to use these thoughts to guide our lives.

Once upon a time there was a young man who wanted to build a home for his family and himself, and he had two materials to build with, steel and adobe. Now he loved the steel for its strength, but he observed that it would be hard to work with and that the adobe would make a better, more comfortable home; so, he turned to the adobe, and because of its ease and pliability, soon had raised a very nice place to live in. He was happy, his family was happy, and the adobe was happy, for all were in harmony with each other. But, the steel was unhappy and remained unhappy, because though many people loved it, nobody wanted to build his home with it. Then, one day, the man became restless; it was his desire to build a higher house in order to enjoy the warmth of the sun. He then started to add on a second floor and then a third floor and then a fourth floor, and the adobe began to groan because it could not stand the weight of the added height and began to be unhappy under the strain. The man then became very unhappy since he wanted to build higher and could not do so because of the limitations of the adobe, and the family became unhappy because the man was unhappy, and the adobe was unhappy, the steel was unhappy, and unhappiness reigned throughout. The man became unhappier still

because he could now appreciate the strength of the steel and longed for it with all his heart and for the heights to which together they could go.

Finally, fate intervened and the unhappy tenants were evicted by the landlord to make room for a jollier couple. Right away the man, wiser by experience, ran to the steel and started to build anew. The new material, cold and hard, was very hard to work with and did not make such a comfortable home, but the man worked harder and harder since he knew that with the steel he could reach the warmth of the sun. As the work progressed and the rays of the sun warmed the steel, the man became happier and happier, and the steel became happy because its strength was finally being appreciated and utilized to reach the heights for which it was intended. But what of the adobe? Had it become happier or was there still misery?

At first the adobe was very unhappy because it had seemed to lose its purpose and its pride in having failed to achieve the heights desired by its owner, but when the new man moved in things began to change. Not so anxious to reach higher things, the new man loved the adobe for its comfort and just settled down to rest. This made the adobe happier than it had ever been before and thankful even for the first man's eviction.

The adobe became happy, its owner became happy, and the family with the steel became happy. The steel and the man became happier and warmer as they went higher and closer to the sun. But now the man wondered and said to his father, "Father, surely you knew this to be. Why did you not tell me and save us this sorrow?" Then the father looked at him with love in his eyes and answered, "My son, had you taken the steel on my advice, you would have always looked back at the adobe and not appreciated the strength of the steel, but by letting you do as you wished, I let you learn to appreciate the steel, and I also, therefore, taught you how to build high things, warm things."

The moral, consequently, is to know the nature of Love and the goal to which one is building. The main purpose in life and death is this goal of understanding Love and growing closer and closer to the Infinite. All else is secondary, and to put comfort or ease of the situation before it, is to merely delay the achieving of this end. In the same manner, it is being unfair to ourselves and making the greatest mistake of our lives to be prejudiced against realizing the reality of emotions, of Love, and of God.

All this may seem impractical or visionary but it is not. It is nature . . . it is law. The sooner one learns to respect the law of Love for what it is, the sooner he will be able to achieve his true happiness and the sooner he will be in a position to grasp the mysteries of the universe, because in everything, through everything, and between everything there stands the most basic force in the entire universe . . . the law of Love.

"Attir'd with Stars, we shall for ever sit,
Triumphing over Death, and Chance, and thee
O Time."

John Milton

TIME, DISTANCE, AND MOTION

THERE ARE a great many things we take for granted which may or may not be true, but in our discussions and thought we seldom stop to consider the truth of our basic premises. For instance, we have generally accepted the axiom that two parallel lines never meet . . . that they might meet would be too ridiculous a thing to consider. However, a system of non-Euclidean geometry was devised some time ago based on the taking of Euclid's axioms and reversing their conclusions. In this case, one of them was that two parallel lines do meet. The resulting system of non-Euclidean geometry amazed everybody by fitting in with the Relativity Theory more feasibly than the oppositely axiomatic and obvious Euclidean geometry. Perhaps, then, we began to wonder, two parallel lines do meet even though it seems incomprehensible.

The behavior of light is another thing we assumed incorrectly until the Michelson-Morley experiment showed us how the ridiculous can be, indeed, the fact. It should become increasingly more apparent, therefore, that man's knowledge of things is not only limited by sensual perception (including broadly even the sixth senses) but is warped or colored by the limitations of his senses and his thought experience. In this respect, since man has thus far been limited in experience to terrestrial happenings primarily, his thought is similarly limited. Also, though he has had instruments for some time, these instruments have, until very recently dealt only with phenomenal interpreta-

tion hardly more than a little removed from his unaided comprehensive abilities. That is, we measured velocities instrumentally which were relatively quite slight and within reach of our sensual faculties. Then we began to break away from our terrestrial or Newtonian bounds with such things as the interferometer experiment.

Thus it has been with Time. We have, generally speaking, merely stood dumbly staring at a progression of clocks, too fascinated by the motion of the pendulum to see behind the face and too limited in conceptual maturity to recognize even what we might see should we look. Consequently, we have, in our limited sphere, never really been aware of what Time is. We have been too satisfied with accepting its presence as axiomatic to analyse its nature. Even A. N. Whitehead, in attempting to analyse it, defined it roughly as the duration between events, and by this we can see that since the word duration means time of persistence, the definition does little more than explain Time as time . . . true as it may be, it does little to advance our knowledge.

Therefore, the discovering or analysing of the nature of Time is something which man has yet to do satisfactorily and something of relatively high importance due to its basic conceptual nature. That is to say, the invention of such things as the automobile, the steam engine, and the airplane, as great as they may seem, are not as fundamentally significant as the discovery, for instance, of the process of invention itself. Likewise we can see that just as such a fundamental step was a very crucial point in man's development, one which was difficult to take and which had to be grown into, the discovery of the nature of Time is a problem of the same order. It is one which is necessary before we can progress much further cosmologically and one which will lead to many otherwise locked doors in the chamber of knowledge.

In approaching the solution to this problem, therefore, it must be borne in mind that we cannot achieve success

unless we admit its basic nature and again override the general materialistic limitations which have so often been our Waterloo. Difficult as this may seem, it is not something which is impossible and is, as a matter of fact, somewhat facilitated by a clue given to us in the study of Whitehead's definition of Time as the duration between events. That is, duration here can also be said to mean, "a thing separating events one from another." It leads us to realize that a time lapse is actually a form of definition to the mind. If there were no time, all events would be collapsed into one instant and thereby become an indefinable jumble, while in actuality our sense of Time is what defines entities and gives them to us in an organized parade.

Consequently, Time in this meaning also helps to give us our sense of substantiality by imposing a forced pace concept on our minds. Take the Rock of Gibraltar, for instance, the Temple of Karnak, or a telephone pole. All seem quite substantial, but if our sense of pace were speeded up, the thousands or millions of years of their existence would pass more rapidly. The rise of the Rock of Gibraltar from the ocean, its eroding disintegration and final disappearance as a separate object would happen so quickly as to appear to us like a wave on the ocean, a movement rather than the apparent frozen duration of one of its phases. Likewise, the Temple of Karnak, the telephone pole, or the earth itself would appear like a pulsing vision rather than a substantial object. Therefore, we can see that Time is a distinguishing perceptive function; it makes sense of sense perceptions. More accurately, it is the result of thought or the organizing process, rather than the entire process itself. To cease to think is to cease to exist in Time.

Continuing in this vein of thought, then, notice that one's sense of Time does vary within one's own lifetime continually. For example, one who is engaged in some form of demanding work loses track of the passage of time, but

one who is idly sitting by notices every boring second. Also, one does not usually know how much time has passed while soundly asleep. He may awake from an eight hour instant or from a week's vacation on some South Pacific island. Yet, at the same time, there is an independent Time pace, because the material universe (phenomenal) is also paced independently. Of course, since our knowledge of phenomenal existence exhibiting this Time pace is dependent upon our sensual perception and cognitive process, the apparent existence of an independent Time pace could also be the product of our mental processes. However, there is, even when considered purely on the basis that everything is dependent on our minds, two separate and distinctly different Time relationships. First, there is the objective and conscious system of rigid, one-way, and regular time intervals as the phenomenal universe appears to us; and second, there is the loose, fluid system of subjective time intervals as the noumenal universe appears to us.

We are all aware of the first type, represented by our clocks, our radio activity time determination, and most of our everyday life, but the second has only recently been opened up to us scientifically. That is, in the study of parapsychology, Dr. Rhine's experiments showed this to be the case when the theory was put to the test. "It should be expected, then," he writes, "that psychic phenomena would be found to be as independent of time as they are of space. Time should not be expected to show a limiting relationship if space fails to do so.

"And time does not. . . . There is no time arrow along with the experience [psychic] to mark it as past, present, or future . . ."[1]

This shows us how our minds can, from a nonphysical point of procedure, be freed entirely from the limiting factors of Time as we know it. In parapsychology it is called

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1. Dr. J. B. Rhine, *New World of the Mind,* pp. 16-17.

precognition and postcognition, described earlier, and in other various fields of mysticism, etc. it is known as clairvoyance.

When the Theory of Relativity was developed, it was found that time also varied with the speed of light, or more accurately, that Time (like distance) is a variable quantity. "Hence," as Lincoln Barnett explains, "according to Relativity, the heartbeat of a person traveling with the velocity close to that of light would be relatively slowed, along with his respiration and all other physiological processes. He would not notice this retardation because his watch would slow down in the same degree. But judged by a stationary timekeeper he would 'grow old' less rapidly. In the Buck Rogers realm of fantasy, it is possible to imagine some future cosmic explorer boarding an atom-propelled space ship, ranging the void at 167,000 miles per second, and returning to earth after ten terrestrial years to find himself physically only five years older."[2] This is what is known as the effect of time dilatation, this relative altering of Time.

In the same vein of theory, a man in a rocket could head in the direction of some star 100,000 light years distant with a speed approaching so close to the velocity of light that he would, relative to the earthbound observer put himself in a state of suspended animation but relative to himself not notice a change of pace. Then he would appear to our earthbound observer to reach the star in a little over 100,000 years while to himself the journey would seem to take only 10 years, say. In this way it would take him only 10 years to travel the distance it takes light to travel in 100,000 years, and he would, relative to himself, have exceeded the speed of light considerably without having quite even approached it relative to the earthbound observer.

However, perhaps if we look at the situation in a new

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2. Lincoln Barnett, *The Universe and Dr. Einstein,* p. 65.

way we can begin to arrive at some conclusions which are not only astonishing in their suggestions but also quite revolutionary to the more or less accepted theories on time dilatation. In fact, it will amount to a clarification or refinement of the Theory of Relativity to such an extent that it should more properly be classed, in all fairness to the Theory of Relativity, as the separate Theory of Substantiality. At any rate, the argument hinges on considerations about the reality of the noumenal and phenomenal spheres as discussed thus far and a re-examination of the Theory of Relativity as effected by new conclusions concerning increase of mass, decrease of axial length, and time dilatation of relative bodies in motion.

If one were in space within a rocket and he looked at a star some distance away, he would have no way of knowing whether it was 100,000 or 200,000 light years away from simply looking at it. Furthermore, no matter at what speed the rocket would be going, it would be, in one sense, standing still. It can have speed and direction only in relation to something else; it can have no absolute speed and direction. This is the meaning behind relativity. It requires that an object's material substantiality does not alter with velocity (with respect to itself), because it can have no velocity in relation to itself, only in relation to some other object. From this, a rocket can project itself close to the speed of light, because though its mass becomes relatively infinite, its fuel's mass also becomes relatively infinite. That is to say, the only difference between a rocket traveling at one speed or at another is in its relationship to a relatively stationary object.

Velocity, therefore, is meaningless to an independent system except with reference to some outside system; or in other words, the increase in mass, time dilatation, and length shortening of an object in motion have no meaning on the object itself. This means that the velocity of light is an effect and not a thing. Rather than calling the con-

stant "c" in the equation $E=mc^2$ the velocity of light, it should be called the velocity of substantiality, or in other words, that velocity at which energy becomes substantial.

Light travels at or about the velocity of substantiality but to call it the velocity of light implies that it is solely associated with light, when light is actually what it is because it travels at the velocity of substantiality. Therefore, the velocity of substantiality is a sort of matter barrier, or that point at which energy transforms itself into matter and vice versa. This would require, as we can see, that light travel at a constant speed without consideration to the speed of relative objects, because velocity in this sense has meaning or relationship only to material as material. Also from this, we can see that an object by itself has no velocity, or if one wants, he can assume it to be traveling at any velocity since velocity means to go from one place to another and place in space is meaningful only in relationship to an object. By this we can see that an object cannot be said to be going at a certain absolute velocity; it can only be said to be, "coming toward me," or, "going away from me." Absolute velocity, therefore, can only be said to exist with respect to the velocity of substantiality, since the velocity of substantiality is the relationship at which objects become substanial to each other and since velocity has no meaning when an object ceases to be substantial relative to another. At a higher velocity a thing becomes unsubstantial and at a lower velocity it becomes phenomenal.

Energy, then, is mass which is insignificant or unsubstantial in relation to another mass because of its relative motion. Substantial or significant bodies (matter) are energy in bound, controlled form . . . having little relative directional speed. A rocket traveling at the speed of substantiality relative to a body becomes insignificant, unsubstantial, or nonmaterial to that body. The releasing of energy from a material body is the transforming of its internal motion (energy) to an external or directionally diverging system

(relative to the observer). By this, the matter is destroyed through conversion and is truly only relatively destroyed.

Now, if a rocket is in space proceeding from the earth to a distant star, the time of the people in the rocket should be slowed with respect to the people observing them on the earth according to time dilatation, but since both the earth and the rocket are actually independent systems, we can and should realize that just as the rocket can be considered to be moving away from the earth at near the velocity of light, the earth can also be considered to be moving away from the rocket at near the velocity of light. Consequently, the time of the people on the earth is simultaneously slowed with respect to the rocket passengers. That is, in space (or anywhere) whatever happens to one party of the two relating parties will also occur to the other party in precisely the same relationship. To assume that time dilatation, shortening of length, and increase of mass would occur only to one party in relation to the other party is to assume that there is some absolute orientation point coincidental to one of the two parties, which in itself is contrary to reason and the Theory of Relativity. This means that, in effect, time dilatation, shortening of the directional length, and increase of mass nullify each other in such a way that any two substantial objects will readjust to each other upon resuming their relatively motionless relationship and that not only the mass and length of a rocket returning to the earth will resume its former relationship but its time relationship will also readjust. By this we can see that the proposed assumption that man can circle the universe and return to his base planet but find the people long since dead and the planet perhaps evolved way beyond its former state, is false. Theirs and his time of life will have been the same. It means also that the reason why man (or an object) can and simultaneously cannot exceed the velocity of light is because any speed in relative excess of the speed of substantiality causes him to become relatively

nonexistent. In this way he can approach an object by a fourth dimensional excess of the three dimensional system.

To say that the speed of light is unaffected by the speed of the object sending or receiving it is erroneous, because it implies that there is some sort of absoluteness to the position or speed of the objects themselves, that the speed of light is an absolute thing, and that its speed (which means nothing except in its relationship to the objects) has an absoluteness unaffected by its relationship to things. The correct thing is to realize, then, that the speed of light is relative to the objects and that its observe constancy therefore is a thing of basic relationship to substantial objects themselves. That is, light has no velocity except in its relationship to substantial objects, that the difference between the substantial (matter) and the unsubstantial (energy) is this relative motion, and that all effects of the Theory of Relativity (mass increase, time dilatation and shortening of length) are significant and factual only in the context of relative velocities (one thing to another). An object by itself has no motion. At the same time, an object is an object by virtue of its relative motionless relationship to another object. However, since motion has meaning only in relation to distance and distance has meaning only in relation to objects, motion has significance only to objects. Similarly, we can see how objects have significance or being only due to relative motion.

Since the motion of light is a constant inconstant or dependent (upon matter) constant, and our idea of what happens (simultaneity) is visually dependent upon the behavior of light, our visually dependent knowledge is accurate to the true phenomenal situation only in regards to relatively static situations. This means that there is simultaneity in the phenomenal universe if one does not require that simultaneity be dependent upon perception by a human organism through visual means. It is similar to the old argument about sound, where a tree falling in the forest

produces no sound if no human is present to translate the sound waves into what is called sound; the truth depends only upon the definition of sound, the waves or the perceptive translation of the waves.

Though things are real because of our perception, there is also (as has been shown) an independent reality, and this means that our growth (maturity) is a matter of learning to adapt ourselves to our environment (noumenal and phenomenal), to learn that nature is something we are a part of, and that though we are slaves to our perception, the limitations of individual perceptive functions may color our concept of reality but do not alter the facts of the independent reality as perceived by the whole total of Man's perceptive assumption.

In this way, what is visible to us and apparent concerning things of relatively high velocities is distorted from the fact. It means that man can and does exceed the velocity of light (with respect to a particular point of reference as related to another point of reference) relative to objects or matter but not relative to unsubstantial things. This is why distant galaxies, receding from us at near the velocity of light (substantiality), are fading; they are becoming unsubstantial or insignificant to us (but not to themselves) while we are becoming unsubstantial or insignificant to them (but not to ourselves). As relatively unsubstantial things, then, they do not produce energy (light) relative to us and gradually become visually insignificant also. However, if we were to approach these receding galaxies and thereby reduce the relative velocities between us, they would begin to appear to us more strongly. Similarly, if we would approach the speed of substantiality (light) relative to the earth, we would pass out of reality relative to the earth and into reality relative to some other, invisible system. We could then return to our system provided we could locate its invisible and insignificant place.

Therefore, one of the reasons why we may not have

been visited recently by extra-solar system people is that traveling at a speed in excess of the speed of substantiality (light) relative to the point of origin is much more difficult than merely producing enough power, avoiding material obstacles, etc. It involves being able to maintain contact with the world left behind and avoiding sudden collision on entering new worlds. To maintain contact visually one would have to keep just under the speed of substantiality to see the fading visual point of origin and to see the approaching destination.

At the same time, all this does not mean that there are several or more superimposed universes which are separate and distinct one from another. It means, rather, that there is one universe of a multitude of superimposed elements (worlds) and that a nonexistent element can become existent without an already existent one becoming nonexistent.

To illustrate these things let us look at a special situation. If two rockets were to shoot off from the earth in opposite directions (from the poles, say) and were to each reach the reasonable speed of 112,000 miles per second relative to their point of origin (earth), they would be going at a speed of 224,000 miles per second relative to each other, for we can at such relatively slow speeds (60% that of light) add them as normal vectors. However, their speed relative to each other is, obviously, now in excess of the velocity of substantiality (light). Therefore, each one then becomes insignificant, unreal, and nonexistent to the other since neither has any time, length, or mass resistance to the other, and no force or energy relationship can exist between them. As far as one rocket is concerned, the other one has dematerialized. But each one is traveling at only sixty percent the speed of substantiality relative to the earth, so that while neither rocket exists to the other, the earth exists to both. Then, as both rockets reverse their directions and approach the earth, they will still be nonexistent to each other until they slow their approach to facilitate

their landing, when they will then become real and existent to each other again. Should they overshoot their mark and collide while exceeding the velocity of substantiality relative to each other, you would have the classic problem of an irresistible force meeting an immovable body, or in other words, two bodies with relatively infinite mass. The result of such a collision would be, as dictated by the Theory of Substantiality, absolutely nothing. To each other they do not exist.

Now it is important to realize that this phenomenally relative nonexistence is not the explanation for the noumenal sphere even though it might appear to be. Such is merely an explanation of the behavior or relationships of the phenomenal universe. The relative nonexistence of a world does not enter it into a relative noumenal sphere, because the noumenal sphere spoken of before is an entirely different matter. It, unlike relatively nonexistent phenomenal elements, is not related by velocity to the phenomenal system or any part of it. That is, whereas the phenomenal universe is composed of a multitude of superimposed elements, defined one from the other by velocity, the true demarkation (subtle as the difference may be) of the universe's dualism is between the entire phenomenal sphere (including relatively nonexistent worlds) and the noumenal sphere.

Time, which has been shown to be a thought function, is one of our most important keys to the understanding of the nature of the noumenal-phenomenal totality. Along with the Time pace of our minds, the phenomenal phase of our being is disciplined and established through the Time pattern imposed by the thought of the Creator. The body, like all materials, is a product or manifestation of this imposed thought pattern. Man on this earth is like a dopey eyed fetus, a creature in the embryonic process of developing, tied to the umbilical cord of materialism and drugged by nature (with the imposed body state and Time) into a safe and guided state of sustenance reception. We are entranced

or captured in a state of impressions created and controlled by the Eternal Force, God. We are held in it as a natural part of our growth cycle and sustain nourishment from it (spiritually) in much the same manner a tree gathers energy through its roots, which are buried or fixed in the ground. The roots seem to act only as a chain to the tree, imprisoning it to a specific spot, but actually, we know that without this imprisonment of the roots, the tree would have never developed. Man, too, must be imprisoned by control in order to develop.

Time with a beginning and end is purely a thing of the phenomenal sphere of existence. This is because it is the product of limitations imposed during only this specific stage of development. In the body state we are powerless to alter our physical state outside of the allowances tolerated by the Thought Pattern Itself. For this reason, there is a beginning and an end to everything material; we cannot take part in the ordering of the pattern; we can only observe it. However, in the noumenal sphere (when we are released from this role as pure observers) we create our own environment, our heaven or hell. That is, Time *is* our own thought and is controlled by the individual. Therefore, beginning and end are meaningless. Also, in the noumenal sphere there can be no fatigue to the properly oriented being. One does not notice the passage of time. A second is an eon and an eon is a second. The future is the past and the past is the future. There is only a beginning and an end in the captive body state or the rigid Time, Matter, Distance continuum imposed by God. It is, so to speak, when we are inside looking out. When we are on the outside looking in, its controls do not affect us except as we choose to allow them to do so by design or lack of development.

All this does not mean, on the other hand, that man can become independent of God even though he does achieve a freedom from the imposed Thought Pattern, be-

cause actually this freedom makes him more dependent. Consider the nature of energy efficiency. Throughout the observable universe or phenomenal sphere of being we find one particular fact holding true . . . there is no one hundred percent efficient system. There is no such thing as perpetual motion even in the movement of the celestial bodies. This means only one of two things. Either the entire system is in a one-way decline of energy in dissipation (the Expanding Universe Theory), or there is an external Source feeding energy into it (Hoyle's theory). The first alternative is incongruous with the nature of the parts and presents an unnatural answer of disintegration without a concomitant integration. Therefore, the second must be the answer; the universe is in a balance of harmonic oscillation (The Hoyle-Lyttleton Theory). The Creator, or more plainly, God, supplies His universe with the power to operate and makes up for any energy loss. The force itself must be some nonmaterial form, and indeed, it is just that. It is that thing which we know vaguely (as it affects us personally) in the crude form of Love. The Cosmic Generator radiates this force, and His thoughts form it or transmute it into what we call matter by relating one thought to the other (relative velocity). Then man, who has within himself a nonmaterial form called the soul, acts as a sympathetic vibrator to this force of Love, causing what is known as worship or intuitive knowledge among other things. He receives the force and uses it in his own creative efforts. The important thing, and the reason why this freedom actually makes man more dependent upon the Creator, is that man still depends on the Creator for the energy to operate. Man receives, uses, and gives off Love, but only the Creator generates it.

Along with this and the consideration of independent reality, the point of who or what conceives of Time (since it is thought) is important to the pattern of Totality. From the conclusions arrived at previously with regards to the nature of things, it should now become apparent that there

is no Time concept except to God and Man (excluding beings solely of the noumenal sphere, perhaps), because Time is, as has been shown, thought, and only God and Man think in a conscious sense. Man is Man because of this reflective manifestation of the process of thought in the Creator.

Other elements in the universe appear to think of time, such as when animals can be taught to react to situations at particular times and to learn to do things at a future time or when migratory creatures follow a time pattern, but this does not mean that they conceive of Time. An alarm clock can be set to go off at a certain time, but it certainly does not conceive of Time. It measures time for our convenience and reacts to its lapse within the framework of the laws of the phenomenal sphere. The lower animals can be aware of *a* time, but not of Time. To Man, on the other hand, though his mind seems to behave in part like an alarm clock, awakening him punctually at a particular time, he also has a conception of Time that allows him to control it. As far as the clock element of his mind is concerned, it is a phenomenal aspect like that affecting the rest of the phenomenal sphere. That is, since what we know of as fatigue is a phenomenal awareness of the pace of integration and disintegration as imposed by the Creator during the term of man's residence (growth) in this same environment, it is this thing called fatigue, in short, which gives us the pace of the body state. The something within a man's brain which automatically keeps time, therefore, is a phenomenal fatigue clock. Thus, it is separate from the noumenal being and can act separately to remind the noumenal soul (or if one prefers, essence) of the phenomenal sphere.

Accordingly, Man, who can conceive of Time, can also (potentially and noumenally) free himself from its talons, and since Man has this ability, he has what is actually an immortal aspect peculiar to himself. Simple or complex as it may seem, it is the key to the concept of immortality

(which in itself is really only a relative term). Specifically, then, the time machine is not only possible but has been used for uncounted centuries. That is to say, prophetic insight is actually a time travel experience, and though it is not a physical transmutation as pictured in some forms of science fiction, it is certainly as real in effect and far more easy to accept intellectually.

Now then, Distance, like Time is a definitive invariant. That is, it is invariant to us in our present body state, because (as we have shown with respect to Time) it belongs to the thought world of the Creator. Of course, this holds true only while we are in the phenomenal sphere. We can realize a state of variable Distance (as with Time) by withdrawing ourselves from this trance-like body state; but notice, this also means, again, that we must sever ourselves from our phenomenal body. This is because the body is a mass of impressions in the phenomenal sphere. When we withdraw from this body we break the trance, so to speak, and free ourselves, thus causing an effect very similar to that of physical death, except that it is seldom as complete. This is what happened to Emanuel Swedenborg when he had his visions. However, we should simultaneously be cautioned that such a severance is generally (in most cases) inadvisable, because it exposes us to our future environment before we are ready to be so exposed.

Our present Time and Distance relationships, therefore, are fixed by the Mind of the Cosmic Intelligence, acting as a common bond to all of us. This means that we are common prisoners, thus introducing opposites to each other in spite of any otherwise natural aversion. Consequently, in this phenomenal sphere we must abide by our situation whether we like it or not in order to be disciplined to our future, more fluid, state. In the noumenal sphere, where man has a measure of control of his own environment, the likes attract and the opposites repel, causing a multitude of sectional divisions. The interesting thing to remember

about this situation is that the degree of control mentioned is not in the manner which ordinarily might be assumed. That is, control is a more or less involuntary result of the inherent qualities of the individual consciousness. One controls his environment involuntarily by the being he is.

For instance, we tend to assume that anyone would enjoy heaven, but this is not so. Unless an individual is developed to an appreciation of those things or qualities which constitute the environment of what is commonly called heaven but is actually an element of the noumenal sphere, he would obviously expel himself from such an unpleasant environment because of his own incompatibility. Furthermore, he has no or little control over his lot. The nature of an individual's other world residence depends upon his own essential nature. He no longer can deceive ("wear a mask") and be with opposites. What he is, is apparent. It dictates his state and makes for him his heaven or hell. This is why it is so terribly important for an individual to pay more attention to the development of these qualities while he is in the ideal training environment of the directed phenomenal sphere. In the noumenal sphere he gains his freedom, but this freedom can be the means for his own despair. Imagine yourself being turned loose to the mercy of your own unleashed subconsciousness! Whenever a man in this phenomenal sphere approaches another (say, in the hall of an office building or in a subway), it is a unique situation and has significance. In the noumenal sphere he might not be able to approach this other person.

The recognition of the noumenal-phenomenal Totality as a fact of perfectly natural consequence, can help us to accept intellectually many things which have been, until now, summarily relegated to the category of superstition and thereby ignored. For instance, the ability of an individual to read auras is something seldom seriously brought into a reasonable discussion, but it is a natural occurrence whether we would like to think so or not, and is perfectly

in keeping with natural totality. This reading of auras, or the ability to determine from psychic impression something about the essential noumenal quality of a subject in question, is no more than an E.S.P. (extrasensory perception) function of the noumenal essence in man. As a matter of fact, it is done everyday even by the most vitriolic skeptics, as when one comes upon a complete stranger whose presence, "for some strange reason or other," seems particularly unpleasant or pleasant. Usually, of course, it is a hidden resemblance to some previously encountered person or situation, but occasionally it is a bona fide psychic impression. By this token, it can also be seen that a person can virtually influence others to the degree and quality of his spiritual development, and can within certain limits, actually change the physical appearance of his body through the use of the same noumenal powers which influence psychokinesis.

Matter, which is then to be considered as no more a reality than some of these "superstitious effects," is the body of conceptual impressions as perceived by us in the phenomenal sphere in the form of energy concentrations or motivation impulses. Its substantial or significant characteristic is meaningless except when applied within the understood limitations of ths same phenomenal sphere. We can liken this thought of substantiality to the situation of a gas viewed next to a solid. One could ordinarily observe that the solid is substantial and real, whereas the gas is not substantial (relatively intangible) and therefore not real. Actually, they are differing states of the same or similar substances. The same holds roughly true for matter as compared to the noumenal substances. They are both differing states of the same force, one controlled from without and the other from within. The impression of substantiality to us in the phenomenal sphere comes as a result of its extrapersonal control.

Also in considering the question of matter, it would be well to investigate into Spencer's view of material integra-

tion as the end itself of evolution. It is certainly true that evolutionary development is a thoroughly universal process and might well be taken as the end; however, we can also observe another thoroughly universal thing . . . there is a coexistent process of destruction, "ungrowth," of disintegration. While nebulous matter is being swept into concentrations and formed into stars, supernovae are exploding throughout the immensity of the phenomenal sphere and other stars are disintegrating their masses through radiation. Why is a thing integrated only to be disintegrated (from dust to dust)? Neither can be the end of the creative process since both oppose each other, come out of each other continuously, and act to reinforce each other. At the same time, the cyclic unit composed of the two acting together is not the end either, because from a Time point of view such a thing as integration or disintegration is meaningless by itself without a mind to perceive it. That is, integration or disintegration means something only in terms of a Time context, and consequently, of a mind or mental process. There is, rather, some other end for which the growth and "ungrowth" processes are a means. That is to say, the thing behind it is the development, or possibly the integration in a broad sense, of nonmaterial, indestructible elements . . . the noumenal substances. These qualities were discussed in more detail in the chapter on Man, but it will be remembered that they were discussed then as the qualities of the Creator possessed primarily by the universe's most complex creature . . . Man. Having the bulk of these finer qualities, Man is Man because Time, Distance, and Matter have meaning to him. It is man for whom this meaning has very definite and designed effect. Otherwise, "it" is all nothing.

In conclusion, then, we have seen how the many finely separated but closely linked facets of the noumenal-phenomenal Totality (universe) work as a unit to produce the finer and nobler qualities displayed in the ideal man (which

seem noble to us because they are the universe's natural end product). God loves and energy is produced. God thinks and worlds literally come into being. Time is thought, a definition of concepts. Distance is a definition of conceptual elements. Man is bound to a rigid scheme of development imposed by the Creator, and this is in the form of a thought world called the phenomenal sphere of the universe. The noumenal sphere of the universe, on the other hand, is much the same as the phenomenal sphere except for the lack of imposition of pace on the mind. In the noumenal sphere, conscious beings have an element of control over the form and pace of substances, thereby making substances a fluid tool of the mind. Time as we know it fails to exist in the noumenal, but is also a fluid tool. Therefore, there is no such thing as a final end or a prime beginning except phenomenally; it is all fluid and relative; the very idea becomes an absurdity. And finally, the noumenal sphere, to any individual consciousness, takes on a shape and characteristic quality in response to the direction of the mind of that individual. It means that, depending upon the development of the noumenal qualities of the particular individual in question, the phenomenal-like pictures presented to him take on the shape literally of a heaven or hell or some degree thereof. He does not have the ability to force this creation, but is at the mercy of his own unmasked being.

"We are entering upon an age of reconstruction, in religion, in science, and in political thought."[1]

A. N. Whitehead

1. A. N. Whitehead, *Science and the Modern World,* p. 36.

THE NEW AGE

In Erich Maria Remarque's book, *The Black Obelisk,* an insane girl tells of her struggle with a practically insolvable problem, that is, whether or not a mirror reflects images when no one is looking at it. In reading this passage our tendency may be to first laugh at such a ridiculous question and wonder about people so far removed from intelligent thought. Then, perhaps, we may begin to ponder the question ourselves and quickly reject it for purposes of our own sanity. We are shocked and afraid of the realization that the girl's insane logic is not necessarily such a definite or sharply defined alteration from our own.

Our first reaction in reading this passage may also sometimes be to panic when we realize that the problem she has found has also now become our own . . . it is not so obviously untrue as it appears on first sight. We, ourselves, now wonder whether or not an image is actually reflected when we are not watching. Of course it isn't, we think hurriedly and drop the subject in a laugh again at our gullibility . . . minutes later the pixy in all of us may turn our eyes aside for reflection. "I wonder," we think.

Like the old question of whether or not there is sound in an isolated spot with no one to hear it or whether or not there is any reality outside of our perception (the world as a figment of our imagination), the girl's problem is not so easily refuted logically as we might like. However, at the same time we may be able to realize that from irrational but strong impulses these propositions seem absurd. We

reject them, as many of Dr. Rhine's critics in the science of psychology admittedly reject the findings of his experiments, simply because we do not choose to believe them. Correct we may be in this, but can we say that such a rejection is absolutely true or even scientifically tolerable?

Soon we must begin to realize that science was not something born whole or mature, that like all observed nature, its one instant is not identical to its next instant. We must soon understand that science is on the verge of a great change, a change toward more maturity. No longer will science be able to keep its absoluteness, its confident air of being able to defeat any adversary, so characteristic of adolescence. No, it will soon have to awaken, like the boy who became a man in battle when he realized that reality gave him none of the protection from death afforded so easily in his former dreams of glory. Science will become aware of its own limitations. It will broaden its scope in mature humility and actually produce more with its limitation awareness than it ever did while riding on the white charger of false confidence.

The question which this work has attempted to bring into most sharp focus is not so much, "Is there a real spiritual world, are there ghosts, are there flying saucers; or even, is there such a thing as extrasensory perception?" These are incidentals, particulars which may or may not be true just as gravity may or may not function absolutely according to the equations so far developed. The important question is, "Are such things possibly true from not only a point of view born and nurtured by desire, but from the point of view of science?" The irrational and unscientific rejection of this last and most important question is the principal reason for the confusion and chaos of modern society, the reason for a situation which led Einstein to observe as, "By painful experience we have learnt that rational thinking does not suffice to solve the problems of our social life. Penetrating research and keen scientific work have

often had tragic implications for mankind, producing, on the one hand, inventions which liberated man from exhausting physical labor, making his life easier and richer; but on the other hand, introducing a grave restlessness into his life, making him a slave to his technological environment, and—most catastrophic of all—creating the means for his own mass destruction. This, indeed, is a tragedy of overwhelming poignancy!"[1]

Such a thing as the Nobel prize may assuage the soul of a guilty conscience, but money cannot buy ideas nor combat the destruction of moral life wrought by the disappointed intelligentsia. It is one thing for science to breed unscientific skepticism of intangibles and another thing for it to solve those problems aggravated or even created by this skepticism. At the same time, it is not altogether fair to expect a scientist to deny the probable nonexistence of intangibles honestly impressed upon his mind by general misunderstanding of what science is and what it is not. It is only that perhaps he should be more discreet and search for some positive answer before attacking that which he thinks but cannot prove is wrong. This is especially important when we remember that frequently people (including the scientist himself) assume that since the scientist deals principally with facts, any opinion he expresses takes on the air of a fact.

The Soviet government recently explained its position as officially atheistic, and in doing so it pointed out the things which caused it to take such a stand. As a matter of fact, it pointed to very concrete and very valid evils present in and caused by churches of the world yesterday and today. Too often these have been overlooked and excused by apologetic laymen as well as interested ecclesiastics, and it is very easy to be sympathetic with the Soviet stand on religion when one realizes the truth behind the

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1. Albert Einstein, *Out of My Later Years,* pp. 142-143.

charges made. However, the atheistic conclusions are not the only ones logically available. Martin Luther observed what amounted to, in his mind at least, the same or nearly the same evils, yet it did not lead him to draw the conclusion that evils instigated by men negated the reality of a Supreme Being. In England, Henry VIII did not solve the real or imagined evil of the church owning two-thirds of his country's land by drawing the conclusion that there is no God. From a logical point of view, then, we might have to realize that Martin Luther and Henry VIII were far more reasonable than the Soviet Union is now in being able to keep their eyes on the more immediate and more responsible cause of the observed evil . . . the natural frailty of man.

Let us, then, today call on science and intelligent minds to re-examine the causes for their attacks on the evils of religious organizations. If *a* church is evil, or even if *all* churches are evil (in part or whole), this is no logical or even fair cause to attack religion as such. We cannot blame a man called Jesus for the bloody crusades or the conquest of Peru, nor does the existence of a million Rasputins prove or even indicate that there is no God.

Such a thing as relativity or the Theory of Substantiality are the marital partners of a realization that existence is not dependent upon perception by man. Man, after all, is but an element of the whole, a creation limited to the extent of his capacities and by his development within the realm of these capacities. He has real or present limitations and ultimate ones, but whatever the situation in particular, this limitation is but a natural parallel to the limitations of all created things. His limitations, like those of a grain of sand, do not alter or prohibit the *whole* beyond those limitations. It is, rather, that man's limitations or finiteness of mental scope is what causes there to be a definition of the supernatural as distinct from the natural. Nothing, be it a ghost or an inexplainable wave pattern, is supernatural, except to man.

Today we are finally beginning to grasp the meaning behind relativity. Up until now we have stood poised on the edge of its realization, cognizant that there is such a thing and excited by the discovery of each new facet. We have not, however, really begun to think as ones born within the idea. The trouble with those who discovered it, including Einstein, is the almost insurmountable obstacle of not being able to shake off one's own background. That is, men of fifty years ago were born into a Newtonian world and cultured to its assumptions. Then, in a great stroke of genius, they were able to see that this world of their birth was not the true picture at all . . . they discovered relativity. Next came the problem of living in their new world, for like Columbus, it is one thing to discover a new world and another to know fully what one has discovered.

Can we say that if we are suddenly born into some spiritual world at death that we will be able to immediately adjust to its vastly different laws and relationships, that we will be able to assume our new station without the personality we have become in our former state haunting our every move? It is the same with new discoveries. The developing must be done by the sons or grandsons, not by the founders. The more drastically different the discovery the more true this is. Therefore, we can see that it remains for men today to develop relativity and build with it, like a relay team runner grabbing the baton from his team mate who has exhausted his powers to bring the baton to him. The runners are the same as each other but the ground covered is different.

As to how this changing world of science and ideas will affect our social and political life, we must first remember the situation we have been gradually getting ourselves into. It is not a pleasant one nor a particularly sensible one. When an animal kills, it is because it is hungry or because of some other natural cause, but when there arises in the universe a being which kills and destroys wantonly without regard

to its needs and capacities, it becomes a thing of interest to the entire natural cycle . . . an unbalanced beast of the worst order. This is, unfortunately, what we have in modern man, because though his dilemma is a natural occurrence due to his frustration and inability to adapt to himself, his resulting aggressive actions are unnatural and insane. That is, he is in this position in spite of his tremendous capacity for compassionate, creative thinking and his natural urge to seek a peaceful solution (yes, so it is). He, himself, does not want the thing he is doing. He is crying out, like the *lipstick killer,* "Catch me before I kill again." What man needs desperately, therefore, is a psychiatrist, a Jesus if you will . . . someone who can grasp people's respect, diagnose the illnesses, and get them to take the necessary steps. Unfortunately for us, when such a thing occurs it must occur naturally, not by any act on our part . . . in the mean time our world burns, but it is not Nero who is fiddling this time . . . it is all of mankind.

Therefore, how long will the people allow themselves to be swayed into the camp of intellectual, materialistic immorality and unmorality by the mediocre minds supporting it or when will they have the courage and individuality to stand up for a truly realistic, romantic approach to the nobility of man? The so called Bohemian individualism is as much a conformist's life as the college fraternity or sorority, the difference being the following of an antisocial pattern rather than a social one. It is one thing to revolt for a cause and another to revolt for the sake of setting oneself up as being different. The Bohemian is merely revolting! The truly mature individualist, on the other hand, is one who can support the side of justice and good even though the specific point may make him appear to be a conservative. The thing distinguishing the individualist is his ability to arrive at his decisions and convictions independently, not his differing from the majority.

There is nothing trite or petty about a high moral and

ethical standard. It is only trite or petty in the mouths of hypocrites. To stand up for justice at the risk of one's life can be considered as trite only by those never faced with the reality of the situation, just as to stand up ostentatiously for justice in the hope for social acclaim can be considered as meritorious only by the petty mind. One must be willing to fight the battle for justice on whatever field it meets him and against whatever foe it pits him, making him fight the world if necessary or uphold the world when the world upholds justice. He who fights only on the losing side is a poor ally indeed, because he does not fight for the cause of his ally but only for the fact that the ally is losing.

Therefore, let those who consider themselves as being more than a part of some ignoble mass, stop following the intellectual herd. In describing our desperate world situation Einstein said, "May you succeed in activating the young generation in this sense, so that it will strive for a policy of peace on a grand scale. Thus you cannot only defend yourself successfully but you can serve your country and your descendants in a degree, as was not given to any previous generation."[1] The realization that existence is not limited to material and its phenomenal reactions is a thing which can open the door to a striving for "peace on a grand scale." It will do this because the ideological foundation of a passion for peace cannot be established sanely until the confusion is cleared. Our confidence in moral truth must be re-established first by giving it a rational cause for existing. If we are not sure it exists as a valid element of our universe, how can we use it to solve our sociological problems?

We younger ones especially must have the courage to be romantic and hope. To succumb to the mechanistic pessimism of modern intellectualism is to be both unintellectual and cowardly. Are we to give up so easily? Are we

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1. Albert Einstein, *Out of My Later Years,* p. 133.

to allow those who have succumbed to sway us by arguments based not on evidence and truth but on the lack of evidence and apparent truth? Are we to believe their arguments merely because we have not been able to argue as tangibly in an intangible field? Also, we must stand, not with those who say, "Arise and be saved!" but with those who say, "Arise and save!" We must have the courage to take the jeers of these blind followers, for though we may die in the flaming world holocaust as surely they will die, we shall die as men who walk upon the earth and not as those who grovel on it, caressing its so called riches. For those of us, therefore, who worship the earth, let us say, "we are animals," but for those who worship the Beauty of Order, the Truth, and Justice, let us stand erect and say, "we are men!"

The full realization and acceptance of the noumenal sphere of things shows us that man must again begin to rely more and more on his noumenally oriented senses and faculties. Already the frontiers of science have pushed beyond objective examination and have reached a place where, in order to proceed, we must, ourselves, go beyond objective examination. Certainly, our objective means will improve and will always remain an important part of our approach to that unattainable Utopia of our aspirations, but the understanding of relative substantiality will give us a respect for what might be called, "the objective subjective" and allow us to accept insubstantial things as being merely relatively unreal *to us*. Otherwise, we shall soon have to become satisfied with what knowledge we have and let our terrestrial race spend the rest of its days sitting in a rocking chair, waiting for its sun to set.

The greatest scientist, therefore, is the one whose mind is broad enough to refuse to be limited by such an arbitrarily selected boundary as that of materialism. He is willing to grasp ideas, as did Kekulé, from the intangible and unexplained realm of dreams or, as did Einstein, from wood-

land meditations. He may not accept things of seemingly phantasmagorial nature, but he certainly will not reject them on the basis of personal bias. His mind is one which is mature enough to be humble in the realization of its own limited knowledge and imaginative enough to experiment into less obvious paths. If it were not, he would never rise above the level of his training.

Though some, in a flush of inertial timidity and impotence, will undoubtedly criticize such an approach as leading to a state of superstitious dogma, which would stifle not only objective search but the noumenal procedures as well and make us revert to the status existing during the dark ages, such would be most unlikely. Not only has man progressed enough conceptually to handle noumenal investigation much more reasonably than he did in the dark ages, but now he has the entire field of science staring him undeniably in the face to keep him in check . . . something which was completely lacking those hundreds of years ago. No, we must be wise enough to realize that what became an evil in the dark ages through excess and immature application (spiritual determination of the truth) is not necessarily an evil under all conditions.

Gazing into the vast tracts of galactic star cities, all separated one from another by such unimaginable distances as to make each of them appear to the other as a mere pin point, we might wonder how man could assume the creator of such an infinite expanse to take personal interest in a human individual. However, if we pause to consider the infinite power, complexity, and magnificence of such a gigantic Creator, it should not be at all difficult to accept the idea that this Creator could feel and respond to the slightest pulse in any minute particle of His creation, including man. On the contrary, the idea of limiting Him to consideration of only the larger particles would seem to be much more the product of anthropomorphic inference, especially since whether a particle of the universe is larger or smaller than

another is distorted by unknown factors and the result of human comparison.

Man, as insignificant as he may seem to be, is still a wonderful creation. If we look at him in terms of mechanistic philosophy he appears small indeed, but if we begin to open our eyes to his hidden powers within, his comparative stature grows. Yes, we must put out a call to modern science (and all modern men) to broaden its scope and work hand in hand with an acceptance of relative substantiality and an appreciation of supra-phenomenal reality. If it can do this, the advances which can be made would stagger the present day mind. The greatest exaggerations of science-fiction fantasy will one day be seen as gross understatements of fact, and people will someday look back and wonder why we, with what we have, did not go ahead faster.

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